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OCT 26 1916

OF THE

UNIVERSITY OF

OF

OF

Gleanings ⁱⁿ Bee Culture



Special Bargains in Shipping-cases

With the bountiful crop of honey being gathered there will be need for shipping-cases in which to place the comb honey for market. During the past few years we have made several changes in the style of our cases, and have some stock of styles formerly made, but not now listed in our catalog. There are some people who prefer the older styles to the later ones, and there may be others who would use the older styles if bought at a low price, and prompt delivery were made. We have on hand the following stock which we offer, to close out and subject to previous sale, at the special prices here named:

- 2 crates of 50 each, 9½-inch, 2-row, at \$4.00 per crate.
- 19 crates of 50 each, 10-inch, 2-row, at \$4.00 per crate
- 13 crates of 50 each, 6¼-in. 3-row, at \$4.00 per crate.
- 56 crates of 50 each, 12-pound cases, at \$4.00 per crate.

All of the above have either 2 or 3 inch glass, and take 12 sections 4¼x4¼x1½ plain.

There are also for the same size section, packed 10 in a crate:

- 10 crates of 10 each, 9½-in. 2-row at 85 cts. per crate.
- 3 crates of 10 each, 6¼-inch, 2-row, at 85 cts. per crate.
- 4 crates of 10 each, 10-inch, 2-row, at 85 cts. per crate.

For the 4¼x1½ beeway section we have:

- 4 crates of 50 each, 15¼-inch, 2-row, for 15 sections, at \$4.50 per crate.
- 6 crates of 10 each, 15¼-inch, 2-row, for 15 sections, at 95 cts. per crate.
- 10 crates of 50 each, 11¾-inch, 2-row, for 12 sections, at \$4.00 per crate.

- 6 crates of 10 each, 12-lb. safety cases with cartons at \$1.20 per crate.

- 2 crates of 10 each, 12-inch, 4-row, for 24 sections, at \$1.80 per crate.

For 24 sections, 4¼x1½ plain:

- 2 crates of 10 each, 9½-inch, 4-row, at \$1.75 per crate.
- 3 crates of 10 each, 10-inch, 4-row, at \$1.75 per crate.

For 12 sections 4x5x1¾:

- 15 crates of 50 each 3-row cases, at \$4.00 per crate.

ADDITIONAL SHIPPING-CASES AT BRANCH OFFICES.

At Washington, D. C.

- 3 cases, 10 each, 12-lb. cases for 4¼x1½ sections, at 85 cts. each.
- 7 cases, 10 each, 12-lb. cases for 4¼x1½ sections, at 85 cts. each.
- 3 cases, 50 each, 12-lb. cases for 3¾x5x1½-inch sections at \$4.00 per crate.

At Mechanic Falls, Me.

- 5 packages, 10 each, 12-lb. safety-cases for 4¼x1½ sections, including safety carton, at \$1.20 per crate.
- 2 crates, 10 each, 12-lb. cases for 4¼x1½ sections at 85 cts. per crate.
- 3 crates, 10 each, 12-lb. cases for 3¾x5x1½ sections at 85 cts. per crate.
- 1 crate, 10 each, 12-lb. cases for 4x5x1¾ sections at 85 cts. per crate.
- 2 crates of 10 each, 12-lb. safety cases for 4x5x1¾ sections, including safety cartons \$1.20 per crate.

We also offer the following glass jars, to close out at special prices, subject to previous sale.

At Mechanic Falls, Me.

- 5 gross ½-lb. square jars, with corks, at \$4.00 per gross.
- 29 cases of 2 dozen each, Simplex or Federal 1-lb. jars at \$1.10 per case.

At Philadelphia Branch.

- 9 cases of 1 dozen each, 1-pt. Premium jars, 50 cts. per case; \$4.00 for the lot.
- 10 cases ½-lb. square jars with cork, 75 cts. case of 2 dozen.
- 1 gross ½-lb. square jars with cork, at \$4.00.
- 8 cases ½-lb. square jars with cork, 90 cts. case of 2 dozen.
- 4 gross 1-lb. square jars with cork, \$5.00.
- 3 cases 1-lb. square jars with cork, \$1.10 case of 2 dozen.
- 5 gross 2-lb. square jars with cork, at \$7.50.
- 37 cases 1-lb. Simplex jars, 2 dozen per case, at \$1.30.

At New York Branch.

- 20 cases, 12-lb., 3-row, sliding covers, 4x5x1¾.
- 85 cases, 9½-inch, 2-row, sliding covers, 4¼x1½.
- 1 crate 50 2-row and 1 crate of 50 3-row 12-lb. cases for 4¼x1½ sections at \$4.00 per crate.

At Philadelphia Branch.

- 8 crates, 50 each, 12-lb. cases for 4¼x1½ sections at \$4.00 per crate.
- 10 crates of 10 each, same, at 85 cts. each.
- 13 crates, 50 each, 12-lb. cases for 4¼x1½ sections at \$4.00 per crate.
- 9 crates, 10 each, same, at 85 cts. per crate.
- 4 crates, 50 each, 24-lb. cases for 4¼x1½ sections at \$8.00 per crate.
- 4 crates, 10 each, same, at \$1.70 per crate.
- 4 crates, 50 each, 16-lb. cases for 4¼x1½ sections at \$4.50 per crate.
- 7 crates, 50 each, 12-lb. cases for 3¾x5x1½ sections, at \$4.00 per crate.
- 2 crates, 10 each, same, at 85 cts. per crate.

At New York Branch.

- 4 bbls. of 7-oz. tumblers, 24 doz. to barrel, at \$5.00 per barrel.
- 11 gross of 2-lb. square jars with cork, 6 dozen to case at \$7.50 per gross, \$4.00 per case.
- 13 cases of 2 dozen each ½-lb. square jars with cork, at 90 cts. per case.

At Washington, D. C.

- 3 bbl. 12 dozen 1-lb. Simplex jars at \$5.25 per bbl.
- 1 bbl. 12 dozen 1-lb. No. 25 jars at \$5.00 per bbl.
- 2 crates 12 dozen 1-lb. Simplex jars at \$5.00 per crate.
- 1 case 2 dozen 1-lb. Simplex jars at \$1.10 per case.

These are fine for exhibition purposes.

- 4 dozen ½-lb. Herscher jars with nickel tops at 50 cts. a dozen.
- 11 doz. 1-lb. square Herscher jars with nickel tops at 65 cts. a dozen.

THE A. I. ROOT COMPANY, Medina, Ohio

SHIPPING-CASES FOR COMB HONEY

Don't make the mistake of putting a fine lot of section honey in poor shipping-cases. It will lower the price to you and damage your future sales. "Falcon" cases are A No. 1, and will be a credit to any crop of honey. Prices are as follows:

Shipping-cases in Flat, without Glass.

| | | | | |
|---|-----|---------|------|---------|
| No. 1....holding 24 sections, 4 1/4 x 1 1/2, showing 4..... | 10, | \$2.00; | 100, | \$18.00 |
| No. 3....holding 12 sections, 4 1/4 x 1 1/2, showing 3..... | 10, | \$2.00; | 100, | \$18.00 |
| No. 1 1/2....holding 24 sections, 4 1/4 x 1 1/2, showing 4..... | 10, | \$1.90; | 100, | \$17.00 |
| No. 6....holding 24 sections, 3 5/8 x 5 1/2, showing 4..... | 10, | \$1.80; | 100, | \$16.00 |
| No. 8....holding 24 sections, 4x5x1 1/2, showing 4..... | 10, | \$1.80; | 100, | \$16.00 |

Shipping-cases with Glass.

| | with 3-inch glass | with 2-inch glass |
|--|-------------------|-------------------|
| No. 11....Same as No. 1... Nailed, 35c; in flat, 1, 25c; 10, \$2.30; 100, \$21.00..... | 100, | \$20.00 |
| No. 13....Same as No. 3... Nailed, 22c; in flat, 1, 15c; 10, \$1.40; 100, \$12.50..... | 100, | \$12.00 |
| No. 11 1/2....Same as No. 1 1/2. Nailed, 35c; in flat, 1, 25c; 10, \$2.20; 100, \$20.00..... | 100, | \$19.00 |
| No. 16....Same as No. 6... Nailed, 30c; in flat, 1, 22c; 10, \$2.10; 100, \$19.00..... | | |
| No. 18....Same as No. 8... Nailed, 30c; in flat, 1, 22c; 10, \$2.10; 100, \$19.00..... | | |

Read Catalog, postpaid. Dealers Everywhere. "Simplified Beekeeping," postpaid.
W. T. FALCONER MFG. COMPANY, FALCONER, NEW YORK
where the good beehives come from.

HONEY GRADING RULES

GRADING RULES OF THE A. I. ROOT CO., MEDINA, OHIO.

In harmony with the Federal net-weight regulations and the statutes of many states all comb honey we handle is figured with the weight of the section box as well as the case excluded. To get the net weight, deduct the weight of the empty case and 1 lb. 8 oz. for the weight of 24 sections (1 oz. each).

COMB HONEY.

Extra Fancy.—Sections to be evenly filled, combs firmly attached to the four sides, the sections to be free from propolis or other pronounced stain, combs and cappings white, and not more than six unsealed cells on either side. No section in this grade to weigh less than 14 oz. net. Cases must average not less than 22 lbs. net.

Fancy.—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain; comb and cappings white, and not more than six unsealed cells on either side exclusive of the outside row. No section in this grade to weigh less than 13 oz. net. Cases must average not less than 21 lbs. net.

No. 1.—Sections to be evenly filled, comb firmly attached to the four sides, the sections free from propolis or other pronounced stain; comb and cappings white to slightly off color, and not more than 40 unsealed cells, exclusive of the outside row. No section in this grade to weigh less than 11 oz. Cases must average not less than 20 lbs. net.

No. 2.—Combs not projecting beyond the box, attached to the sides not less than two-thirds of the way around, and not more than

60 unsealed cells exclusive of the row adjacent to the box. No section in this grade to weigh less than 10 oz. net. Cases must average not less than 18 lbs. net.

CULL COMB HONEY.

Cull honey shall consist of the following: Honey packed in soiled second-hand cases or that in badly stained or propolized sections; sections containing pollen, honey-dew honey, honey showing signs of granulation, poorly ripened, sour or "weeping" honey; sections with combs projecting beyond the box or well attached to the box less than two-thirds the distance around its inner surface; sections with more than 60 unsealed cells, exclusive of the row adjacent to the box; leaking, injured, or patched-up sections; sections weighing less than 10 oz. net.

EXTRACTED HONEY.

This must be well ripened, weighing not less than 12 lbs. per gallon. It must be well strained; and, if packed in five-gallon cans, each can shall contain sixty pounds. The top of each five-gallon can shall be stamped and labeled, "Net weight not less than 60 lbs." Bright clean cans that previously contained clean light honey may be used for extracted honey.

EXTRACTED HONEY NOT PERMITTED IN SHIPPING GRADES.

Extracted honey packed in second-hand cans, except as permitted above.
Unripe or fermenting honey, or weighing less than 12 lbs. per gallon.
Honey contaminated by excessive use of smoke.
Honey contaminated by honey-dew.
Honey not properly strained.

GRADING RULES OF THE COLORADO HONEY-PRODUCERS' ASSOCIATION, DENVER, COL.,
FEBRUARY 6, 1915.

COMB HONEY.

FANCY.—Sections to be well filled, combs firmly attached on all sides and evenly capped except the outside row next to the wood. Honey, comb, and cappings white, or slightly off color; combs not projecting beyond the wood; sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 13½ gross. The top of each section in this grade must be stamped, "Net weight not less than 12½ oz."

The front sections in each case must be of uniform color and finish, and shall be a true representation of the contents of the case.

NUMBER ONE.—Sections to be well filled, combs firmly attached, not projecting beyond the wood, and entirely capped except the outside row next to the wood. Honey, comb, and cappings from white to light amber in color; sections to be well cleaned. No section in this grade to weigh less than 11 oz. net or 12 oz. gross. The top of each section in this grade must be stamped, "Net weight not less than 11 oz." The front sections in each case must be of uniform color and finish, and shall be a true representation of the contents of the case.

NUMBER TWO.—This grade is composed of sections that are entirely capped except row next to the wood, weighing not less than 10 oz. net or 11 oz. gross, also of such sections as weigh 11 oz. net or 12 oz. gross, or more, and have not more than 50 uncapped cells all together, which must be filled with honey; honey, comb, and cappings from white to amber in color; sections to be well cleaned. The top of each section in this grade must be stamped "Net weight not less than 10 oz." The front sections in each case must be of uniform color and finish, and shall be a true representation of the contents of the case.

Comb honey that is not permitted in shipping grades

Honey packed in second-hand cases.
Honey in badly stained or mildewed sections.
Honey showing signs of granulation.
Leaking, injured, or patched-up sections.
Sections containing honey-dew.
Sections with more than 50 uncapped cells, or a less number of empty cells.
Sections weighing less than the minimum weight.
All such honey should be disposed of in the home market.

EXTRACTED HONEY.

This must be thoroly ripened, weighing not less than 12 pounds per gallon. It must be well strained and packed in new cans; sixty pounds shall be packed in each five-gallon can, and the top of each five-gallon can shall be stamped or labeled, "Net weight not less than 60 lbs."

Extracted honey is classed as white, light amber, and amber. The letters "W," "L. A.," "A" should be used in designating color; and these letters should be stamped on top of each can. Extracted honey for shipping must be packed in new substantial cases of proper size.

STRAINED HONEY.

This must be well ripened, weighing not less than 12 pounds per gallon. It must be well strained; and, if packed in five-gallon cans, each can shall contain sixty pounds. The top of each five-gallon can shall be stamped and labeled, "Net weight not less than 60 lbs." Bright clean cans that previously contained honey may be used for strained honey.

Honey not permitted in shipping grades.

Extracted honey packed in second-hand cans.
Unripe or fermenting honey weighing less than 12 lbs. per gallon.
Honey contaminated by excessive use of smoke.
Honey contaminated by honey-dew.
Honey not properly strained.

YOU DON'T WAIT FOR MONEY WHEN YOU SHIP MUTH YOUR HONEY

We Remit the Day Shipments Arrive.

We are in the market to buy **FANCY AND NUMBER ONE WHITE COMB HONEY**, in no-drip glass front cases. Tell us what you have to offer and name your price delivered here.

Will also buy--

White Clover extracted and Amber extracted.
A few cars of California Water White Sage.
A few cars of California Orange Blossom.

When offering extracted honey mail us a sample and give your lowest price delivered here, we buy every time you name a good price.

We do beeswax rendering; ship us your old combs and cappings. Write us for terms.

THE FRED. W. MUTH CO.
"THE BUSY BEE MEN"

204 Walnut Street.

CINCINNATI, O.

HONEY MARKETS

BASIS OF PRICE QUOTATIONS.

The prices listed below, unless otherwise stated, are those at which sales are being made by commission merchants or by producers direct to the retail merchants. When sales are made by commission merchants the usual commission (from five to ten per cent), cartage, and freight will be deducted; and in addition there is often a charge for storage by the commission merchant. When sales are made by the producer direct to the retailer, commission and storage and other charges are eliminated. Sales made to wholesale houses are usually about ten per cent less than those to retail merchants.

MATANZAS.—We are now paying for light-amber honey from 46 to 47 cts. a gallon.

Matanzas, Cuba, Oct. 7. ADOLFO MARZOL.

DETROIT.—Very little demand at present. We quote extra fancy comb at 15; fancy, 14; extracted, white, 9; amber, 8.

Detroit, Oct. 10. F. P. REYNOLDS & CO.

PITTSBURG.—Demand is opening up fairly well. We look for good business from now on. We quote fancy comb honey, per case, \$4.80; No. 1 or choice, \$4.00.

Pittsburg, Oct. 10. W. E. OSBORN CO.

CLEVELAND.—Both supply and demand for honey continue extremely light, but we look for a much better demand as soon as local fall fruits are out of market. We quote new comb honey, fancy, per case, \$3.75 to \$4.00.

Cleveland, Oct. 3. C. CHANDLER'S SONS.

BUFFALO.—Receipts are light; no surplus stock in our market; demand also light; quality of honey arriving is very fine—the best we have had in several years, grading mostly No. 1 white and fancy white. No dark honey is arriving; honey in our markets is sold by net weight only. We quote comb honey, extra fancy, per lb., 16; fancy, 15 to 15½; No. 1, 14 to 14½; No. 2, 13 to 13½. Clean average yellow beeswax brings 32 to 33.

Buffalo, Sept. 30. GLEASON & LANSING.

PHILADELPHIA.—We have about cleaned up our holdings of last season's honey, and are now in good shape for new stock. The outlook seems favorable for the sale of fine comb honey at fair prices. We quote below the outlook at present in our market. Extra fancy comb honey, per pound, 15 to 16; fancy, 14 to 15; No. 1, 12 to 13; No. 2, 9 to 10. White extracted honey in cans brings 8 to 8½; light amber, in cans, 6 to 6½; amber, in cans, 5½ to 6. Clean average yellow beeswax brings 28 to 30 cts.

Philadelphia, Oct. 10. CHARLES MUNDER.

CINCINNATI.—The demand for honey is good, especially for extracted honey. We are selling white-clover extracted honey from 7½ to 10 in 60-lb. cans; amber extracted honey from 5½ to 8, according to quantity and quality. The demand for comb honey is showing life, altho the big buyers are leary lest the western men "bust the market to smithereens." We are selling comb honey from \$3.40 to \$3.75 a case, and now have calls for No. 2 and No. 3 grades, but have none in stock. For choice bright yellow beeswax we are paying 23 cts. delivered here.

Cincinnati, Oct. 11. THE FRED W. MUTH CO.

NEW YORK.—Honey is beginning to arrive in good-sized shipments now, both comb and extracted. As to comb honey, there is a fair demand, especially for No. 1 and fancy white, which are selling around 14 to 15; lower grades at 12 to 13; mixed and dark, 10 to 11. Extracted is arriving freely, and white clover is selling around 7½; amber, 6½ to 7; buckwheat, 6½. Shipments from the South are not very large at this time, but large shipments are arriving from the West Indies, and will increase next month, when the new crop is ready for market. These goods are selling around 60 to 65 cts. per gallon, according to quality.

New York, Oct. 9. HILDRETH & SEGELKEN.

KANSAS CITY.—The demand for comb honey is light on account of a big local crop. Car of Colorado here this week; jobbing, around \$2.90 to \$3.00. Demand for extracted is light; supplies not very heavy. Fancy and No. 1 comb brings \$3.00; D in No. 2, \$2.75; extracted, white, 8½; light amber, cans, 8; amber, 6 to 7. Clean average yellow beeswax brings 25.

C. C. CLEMONS PRODUCE CO.
Kansas City, Oct. 6.

CHICAGO.—The supply is abundant and is, as usual, in excess of demand during this month. Sales are fair, but large; supply keeps down price. We quote extra fancy comb honey, per case, 15 to 16; fancy, 15; No. 1, 14; No. 2, 12 to 13. White extracted honey brings 7 to 8; light amber, in cans, 6 to 7; amber, 6. Clean average yellow beeswax brings 30 to 32.

Chicago, Oct. 10. R. A. BURNETT & CO.

ST. LOUIS.—The demand for both comb and extracted honey is improving right along, and stocks are quite ample. We quote extra fancy comb honey, per case, \$3.75; fancy, \$3.50; No. 1, \$3.00 to \$3.25; No. 2, \$2.50 to \$2.75. White extracted honey brings per pound 9 cts.; light amber, in cans, 7½ to 8; amber, in cans, 6½ to 7; in barrels, 5½ to 6. Clean average yellow beeswax brings 28½.

St. Louis, Oct. 9. R. HARTMANN PRODUCE CO.

TEXAS.—I note quite an improvement over the latter part of September as compared with the first and previous month. The supply is pretty well exhausted. Honey is light amber, but of good flavor; bees gathering very little at this time. No sections are used here. No. 1 light-amber bulk comb honey is selling at 9 to 10; light amber in cans, 7 to 8. Clean average yellow beeswax brings 25 cts. for common.

Sabinal, Texas, Oct. 2. J. A. SIMMONS.

ALBANY.—Receipts of comb honey are behind hand more than usual this season, especially when there is a good crop as there is this year. We strongly advise shipping promptly to meet this month's demand, which always brings the best prices of the season. We quote extra fancy comb honey, per pound, 16 to 17; fancy, 15 to 16; No. 1, 14 to 15; No. 2, 13 to 14. White extracted honey brings 8; light amber, in cans, 7½; amber, 7. Clean average yellow beeswax brings 30 to 32.

Albany, Oct. 12. H. R. WRIGHT.

PORTLAND.—Demand is light. Comb honey is coming in slowly; quality not up to standard. Tendency is to run to light amber and amber. Prospects for later shipments of comb honey are very fair. Producers seem to be holding for higher prices, which I do not think will materialize. Fancy, per case, brings \$3.60, 14 oz.; No. 1, \$3.50, 12 oz. or over; No. 2, \$3.25, 11 oz. or over. White extracted brings 9; light amber, in cans, 8; amber, in cans, 7. Clean average yellow beeswax brings 28 cts.

Portland, Oct. 3. PACIFIC HONEY CO.

INDIANAPOLIS.—Better demand for extracted than for comb. The quality of both is of the best. We are unable to obtain enough comb and extracted, due to producers holding for a much higher price than the market is offering. We are anticipating that a great amount of extracted will be offered at 6½ to 7 cents in the next two weeks. We quote fancy comb honey, per case, at \$3.75 to \$4.00; No. 1, \$3.50 to \$3.60.

Indianapolis, Oct. 9. WALTER S. POWDER.

TORONTO.—There is no change in the price of honey since our last notice. The demand in this Province seems to be very good and the quality of the honey is very much above the usual grade, a large portion of it being white clover. Owing to the lateness of the buckwheat crop and the dry season, the crop of buckwheat honey will be light.

Toronto, Oct. 11. EBY-BLAIN, LTD.

MEDINA.—No new features of importance have been presented in the honey market the past two weeks. The offerings of a number of large lots of California extracted from producers and dealers have occasioned some surprise. The movement of Eastern comb since Sept. 25 has been steady with prices unchanged.

Medina, O., Oct. 10. THE A. I. ROOT CO.

Gleanings in Bee Culture

E. R. ROOT A. I. ROOT H. H. ROOT J. T. CALVERT
 Editor Editor Home Dept. Managing Editor Business Mgr.
 Department Editors:—Dr. C. C. Miller, J. E. Crane, Louis H. Scholl, G. M. Doolittle, Wesley
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AGENTS. Representatives are wanted in every city and town in the country. A liberal commission will be paid to such as engage with us. References required.

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GOODNA, QUEENSLAND.—H. L. Jones. Any Australian subscriber can order of Mr. Jones. *Per year, postpaid, 6/7 p.*

DUNEDIN, NEW ZEALAND.—Alliance Box Co., 24 Castle St. *Per year, postpaid, 6/7 p.*

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Home Markets for Honey

If you are developing a local market for your honey, you will be interested in the following from a Wisconsin producer, who writes regarding the 64-page book, "The Use of Honey in Cooking." He says:

"We received the honey recipe books O. K. and were more than pleased with them as they were one of the finest boosts for getting honey before the people that we could have procured.

"The people were clamoring for them and our booth was one of the leading attractions at the fair.

"One of the members of the association who was putting out small glass containers sold one to a lady from Minneapolis, who was attending the fair here. This morning he received an order that she had taken among friends at home to ship 25 gallons of extracted honey to Minneapolis. So it pays to advertise, and your recipe books do the work." (Name on request).

We offer these books, "The Use of Honey in Cooking, 64 pages, 115 tested honey recipes, with many facts regarding honey, at 10 cts. each, postpaid. In quantity lots with your advertisement on the back cover (no other address given in the book) as follows:

100 copies, printed as above....\$ 4.50

250 copies, printed as above.... 9.25

500 copies, printed as above.... 17.25

1000 copies, printed as above.... 25.00

If sent by mail, postage extra.

Order a quantity and watch your honey go.

The A. I. Root Company

Medina, Ohio



The "BEST" LIGHT

Positively the cheapest and strongest light on earth. Used in every country on the globe. Makes and burns its own gas. Casts no shadows. Clean and odorless. Absolutely safe. Over 200 styles. 100 to 2000 Candle Power. Fully Guaranteed. Write for catalog. AGENTS WANTED EVERYWHERE.

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Deposit your Savings
with
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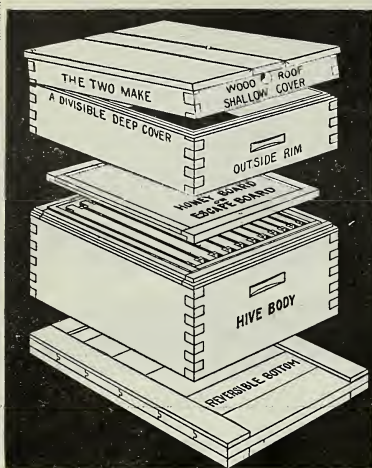
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If prices are right we can use unlimited quantities.

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Order Your Supplies for Next Season Now?

This last season was an unusual one and beekeepers felt the need of supplies during the honey season. It meant a loss to them if not on hand. Freight this year has been slow for some reason. Why not be forehanded and have the goods on hand when wanted? We try to get goods off promptly but the railroads were slow in making delivery---a month or more in some instances. Goods ordered now carry 4 per cent discount during October. Send in your order just as soon as you find out just what you require and we will take care of it promptly.

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HOW ABOUT NEXT YEAR?

The season of 1916, just closed, has been a most unusual one. Beekeepers who did not fortify themselves early in the season by securing their hives, sections, and other goods, and having their equipment ready for the bees, found when the honey season was upon them that they were up against the following conditions:

Everybody wanted bee goods, dealers had depleted stocks on account of the unusual demand, manufacturers were several weeks behind on orders, their factories were working overtime. Some beekeepers were delayed, some disappointed, some got their goods when it was too late.

Now, Mr. Beekeeper, What are You Going to do about Next Season? ? ?

Prospects for a big Bee and Honey Season next year were never better than they are right now. **PREPARE!** Order your goods this fall. Write us or our dealer nearest you for a list of new prices owing to advances in raw material.

If you are not on our mailing list, write us at once and we will send you a catalog containing name of the distributor nearest you, and in this way you will also be sure to receive a copy of our new 1917 catalog when it is issued.

Lewis Hives and Sections and all other goods are made from the best material and are scientifically manufactured.

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We absolutely guarantee our goods to be perfectly manufactured of the best material for the purpose. On examination, if our goods are not as represented, we do not ask you to keep them. Return same at our expense, and we will refund your money, including any transportation charges you have paid. If you purchase our goods from one of our distributors, this same guarantee holds good, as we stand back of them.

G. B. Lewis Company, Watertown, Wisconsin, U. S. A.

Send for catalog giving name of distributor nearest you.

DON'T FUSS

With your old combs and cappings, but send them to us. We will render them into beeswax for you on shares and pay you cash for your share, or we will make it into

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If you prefer, we will pay you our best trade price in exchange for BEE SUPPLIES.

Send for our terms. We feel sure that we can save you some money besides saving you a "mussy" job.

BEESWAX WANTED at all times.

Dadant & Sons, Hamilton, Illinois

GLEANINGS IN BEE CULTURE

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EDITORIAL

The Cause of Swarming

IN a little discussion between J. E. Hard and J. E. Crane, in this issue, page 969, we believe the majority of our best beekeepers would favor Mr. Crane's viewpoint.

Amount of Stores Necessary to Winter a Colony

THIS difficult question is answered very satisfactorily by Mr. Doolittle in this issue in his department, page 972. While he admits that a colony can be wintered on one pound of stores a month, this amount is altogether inadequate, because bees, in order to do well in the following spring, must be "rich in stores." He therefore recommends feeding up in the fall with more than will carry them thru. It is pretty well agreed now that fall feeding is much better than scant feeding, and then feeding again in the spring to stimulate.

Late Fall Feeding; a Precaution

MR. W. C. MOLLETT, in this issue, urges early feeding in the fall. In the main he is correct; but one precaution should be noted. Feeding in early September may start brood-rearing, with the result that a considerable amount of stores will be consumed. While the conversion of syrup into young bees is a splendid thing, the process sometimes leaves the colony short of stores; and it may have to be followed up by later feeding; and certainly all the colonies should have a careful inspection. If one is obliged to feed after cool weather sets in, he should make a syrup $2\frac{1}{2}$ parts of sugar to one of water. It should be given hot, and all at one feeding.

Experiment Station Rears Queens

THE Agricultural Experiment Station of the University of Wisconsin in Bulletin 268, May, 1916, gives a brief report of a

new work that they are taking up, recognizing that Italian bees are more resistant to European foul brood. Efforts were made during 1915 to develop queen-rearing in connection with the work of the Economic Entomology Department. Mr. C. A. Aeppler is in charge of this work. One hundred and twenty-six queens were sent out to beekeepers in twelve counties. The queens sold at 50 cts. each. A larger number of queens will be reared this season in order to meet the expected demand.

Bees Fertilize Cocoanut Blossoms

IN the journal of the Jamaica Agricultural Society for July, 1916, page 273, is an interesting account of the value of bees to cross-pollinate the cocoanut blossoms. The cocoanut bears the two kinds of flowers—the male and the female, altho those on the same stalk do not mature at the same time. Generally, too, there is only one set of flowers open, or ready to fertilize, or to be fertilized, on a cocoanut at one time, this being one of nature's devices to guard against inbreeding or self-fertilization.

It has been noted that, on cocoanut estates where bees are kept, the yield is phenomenally high. Palms of five and six years bear heavy crops, and the bunches are well filled.

Beekeeping on the Indian River, Fla.

IN this issue Mr. L. K. Smith gives a rather discouraging view of the out-apiary business on the Indian River in Florida. But if one were going to keep bees for pleasure and profit, putting the main emphasis on *pleasure*, we do not know of any place in the United States where one could get more solid enjoyment than operating a series of yards up and down the Indian River. We have been there. In fact, the editor, three years ago, got back his health in making a cruise on that same river, an

account of which was given in GLEANINGS for April 1 and May 1, 1914, February 15 and March 15, 1915.

Mr. Smith mentions having very small yards. He might with profit have had larger ones; nor was it necessary for them to have been so far apart, unless there was difficulty in finding a suitable location. Mr. O. O. Poppleton made a success of the out-yard business on this river some years ago. He secured health and pleasure both.

Distance Bees Fly in Quest of Stores

THE two Millers, page 966, on the question of how far bees fly in quest of stores, are at loggerheads. While we must admit that bees will fly from three to five miles for nectar when conditions are favorable, it is our opinion, from considerable observation, that they very often do not go much over a quarter of a mile. Very recently we had occasion to move the Waterworks yard scarcely a mile in an airline to the Blakeslee yard.

Our man was asked to see whether any bees returned to the Waterworks location next day. Not a one. Apparently the bees of the moved yard had not been in the habit of going more than half a mile, and they might have been going less. This was in the aster bloom.

We shall have to conclude that there is no invariable rule. It is wide of the truth to say that bees will not fly five miles sometimes; and it is equally erroneous to say they will not go more than a quarter of a mile. That they will generally not go more than a mile in average localities and seasons we believe is not far from the truth.

Outdoor vs. Indoor Wintered Colonies

THERE is a general belief among our best beekeepers that, while colonies wintered indoors consume less stores, colonies of equal strength wintered outdoors will be in better condition for the harvest. This belief is founded on the fact that outdoor-wintered bees will begin rearing brood earlier than those indoors. Breeding causes consumption of stores. Young bees in the spring are a big asset. If so, the greater consumption of stores has been a good investment.

In this issue, in his department of Stray Straws, Dr. Miller says that, since he has put a furnace in his cellar, and allowed the door to be open much of the time, he thinks his bees are just as vigorous in the

spring as those wintered outdoors, and he is probably right. Since he put in the furnace he has better ventilation and a uniformly higher temperature.

Outdoor air, it is said, has a tendency to favor breeding. Some years ago one authority on indoor wintering made the statement that he did not want too much fresh air in the cellar because it started breeding; that such breeding would cause a larger consumption of stores, and dysentery.

There may be something in this; but we believe that Dr. Miller is on the right track in giving an abundance of ventilation, and with it a higher temperature. If the outdoor colonies have any more vigor than indoor colonies it is because they have young bees; and young bees, of course, mean early brood-rearing. We are perfectly well aware that early breeding in the cellar is attended with some risk, especially to beginners; but this is not saying that an expert cannot avert dysentery.

Honey-crop Conditions and Prices

IT is clearly evident that there was a shortage in the yield of honey in the Imperial Valley and clear up thru California. There was also a shortage in Idaho, where such a large crop of comb honey was produced last year. There was likewise something of a shrinkage in Colorado and other mountain states.

However, the big crop of honey, both comb and extracted, in the East at this writing, will in all probability more than offset the shortage in the West. The honey-market quotations given in our last issue and in this issue, confirm this in that they show a slightly easier market than last year. Taking everything into consideration, it is quite remarkable that the market is as firm as this.

While the quotations over the country generally would seem to indicate a better demand for both comb and extracted, the demand at Medina is certainly brisk, and prices are holding fairly firm. We do not understand why this is so unless it is because of our publicity campaign in the shape of some full-page advertisements in the *Ladies' Home Journal* and *Good Housekeeping*. Our readers will notice that these put strong emphasis on honey as a food and condiment and on our own brand in particular.

It is evident that producers are beginning to unload their crops, and they are doing it at their convenience. Too much unloading at one time demoralizes the market.

It is well to bear in mind that the market on *comb* honey will ease up as soon as freezing weather comes on. The trade is afraid to get it in cold weather, and more afraid of its granulating afterward. The experience of last year has been an expensive object lesson to many. Comb honey should if possible be shipped before the holidays; for after that time the demand will be sluggish, if experience means anything, until the next year's crop is in sight.

Honey-producers as usual are making the mistake of extracting their honey too green. The result will be that some of it will sour in the open market. Such practices will have a strong tendency to disgust the trade and depress prices.

Exportation of American Honey into Germany.

IN the "Daily Commerce Reports" issued by the Department of Commerce, Washington, D. C., is a report from Vice-consul Ernest L. Ives, Breslau, Germany, under date of August 28, on the subject of the German bee industry. Among other things, he says that the present yearly production of honey and wax in Germany is between five and seven million dollars' worth.

He refers to the migratory beekeeping practiced by the Germans, or how bees are moved around on "wandering carts." These carry from 25 to 30 hives, such carts being moved from one place to another. They are in reality portable house-apiaries. Besides these special moving apiaries on wheels, something over 375,000 hives are transported on special trains to the heaths near Luneberg and Oldenburg.

Under the heading of "Imports of Honey and Artificial Honey" he furnishes a table of the amounts of honey from the United States and other countries sent into Germany. With the exception of Cuba the United States stands at the top of the list.

The price of German honey is 65 cts. per lb.; and this extraordinary increase in price, the vice-consul says, is mainly due to the very poor harvest in the spring and summer of 1915 and of this year, and also to a falling off of imports. Why he makes no mention of the great war in Europe in this connection is not easily understood. In ordinary peace times 65 cents is an extraordinary price.

Under the head of "Criticisms of Methods of Collecting Honey" he has this to say:

As previously mentioned, large quantities of honey have been imported from America.

Beekeepers complain of the competition of this honey, which is sold at very low prices on account, as is claimed, of its "inferior quality." It is stated that honey in wooden tubs is imported by wholesale dealers at a price of \$3.80 to \$4.75 per 110 pounds. Adding the costs of packing and transportation, it can be retailed at \$0.10 to \$0.13 per pound. This low price is said to be due to the methods of collecting the honey in the countries of origin, the swarm being killed by sulphuric acid; this affects the aroma of the honey, which is also contaminated by the corpses of bees, chrysalises, and other impurities, whereas German honey is won by the centrifugal process. Further, the German product is usually packed in glass jars and cans. Recently tubes containing one-eighth to one-half a pound have been much in use. Wooden tubs are not considered practical for the transportation of honey, since wood is said to spoil the flavor.

The best honey imported from the United States is packed in tin canisters containing about 55 pounds, two canisters being usually packed together in a wooden box. Honey from South America is imported in tubs of 165 to 220 pounds.

Evidently the vice-consul, Mr. Ives, has got some things a little mixed. In the first place, honey is not shipped from America, or at least from the United States, in tubs;* and in the second place, the quality is not affected by the methods of killing bees. Honey from log gums and box hives is not exported; and even when such honey is taken in the old-fashioned way, "sulphuric acid" is not the agent for killing the bees. He evidently means the fumes of sulphur.

It would be quite interesting to learn where the vice-consul gets his information about American honey coming in tubs of 110 lbs., and the poor quality of it being due to the carcasses of dead bees and to the use of "sulphuric acid" when killing the bees. He possibly meant sulphurous acid or vapor of burning sulphur. As a matter of fact, sulphur dioxide is the agent used; *i. e.*, the gas of burning brimstone.

When he speaks about artificial honey he is probably taking hearsay. While it is presumably true that adulterated honey might be shipped to foreign countries and sold as honey, it is evident that the writer has got things a little mixed.

Probably some of our German correspondents can enlighten us; for the German beekeepers themselves, who know anything about American methods, know that our box hives or old log gums do not produce any honey that goes beyond the locality itself.

* Possibly he means "kegs."

Dr. C. C. Miller

STRAY STRAWS

Marengo, Ill.



JAN GREVE, of Bergen, Norway, writes that the statement in GLEANINGS that "The demoralization of the beekeeping fraternity of all Europe seems to be complete," greatly overstates the case.

Outside the direct theater of the war, beekeepers are going along as usual, except that they have to pay a high price for sugar.

YEARS ago, when I wintered in a cellar so cold that it had to be kept always closed, I always had an uncomfortable feeling that in spring the bees were not so vigorous as those wintered outdoors. But since a furnace is in the same cellar, allowing the door to be open much of the time, with pure air always, I think the bees are just as vigorous in spring as those wintered outdoors—possibly more so.

ARTHUR C. MILLER hints at skepticism as to the need of having apiaries 3 miles apart, reporting crops utterly different at a distance of $\frac{1}{4}$ mile, p. 866. Please play fair, Arthur. In ordinary cases, with somewhat level ground, there has been plenty of proof that bees will go several quarter miles, and it's ordinary cases we're talking about when we mention 3 miles. Now will some one (say from near Providence) make out a list of the exceptional cases, and tell us the proper distances for each?

LET me warn the beginner not to take too seriously what is said by Gerstung, page 869, against trying to breed toward non-swarming. We are told, "The reader must bear in mind that the writer had in mind only conditions prevailing in Germany." So it may be that we are to think only of Germany when told that, if we could eliminate the swarming impulse, "the bees would become degenerate, and slowly, yet surely, would go toward extinction." Certainly it hardly appears so in this country. If the Dadants, with only 2 to 5 per cent of their colonies swarming, find their bees going toward extinction, they have kept very quiet about it. For more than half a century I've been trying all I could to prevent swarming, breeding from colonies that never offered to swarm; and the fact that the average yield per colony has doubled is not very strong proof of degeneration.

MR. EDITOR, you ask, p. 837, whether I'm not attaching too much importance to iron in honey. You will hardly think so if you realize how much importance physicians attach to administering iron, even tho "in

very minute quantities," in readily assimilable forms. Please recall that, altho iron is present in the human body in minute quantity, that minute quantity is necessary for health, and even life; that that minute quantity is present in honey in the very best form for direct assimilation; that in sugar it is found not at all; and then figure out for yourself how much importance should be attached to it. "Talking about it for bee-food," were you? Well, don't you believe the all-wise Creator knew just about the right amount of iron to put in for bee-food? And if he put a very minute quantity of iron in it, do you believe you can have first-class bee-food without any iron at all?

[But the amount of iron is a very small part of one per cent. Along with it are other elements in small quantities, like lime, sodium, sulphur, magnesia, and phosphoric acid. Why should not these be considered with iron? After all, is it not the pollen, the dextrose, and the levulose which are present in larger quantities—particularly the last two—that are the elements that make honey better than syrup that is only sucrose?—ED.]

MR. EDITOR, I understand, p. 776, Sept. 1, you can tell by the flight at entrance when bees need more super room. But you don't say how. I can't tell by watching the entrance whether another super is needed or bees have double the room they need. Please tell me how. [Neither can we determine, by watching the entrance only, whether another super is needed, or whether bees have double the room they need, and we do not believe that any one else can. If you will put on your specs and read over again what we have said, you will see that we stated that the condition of each colony, in the incident referred to, was determined by a combination of three different ways: Watching the flights of the bees going into the entrances; tilting up the supers at the back and looking under; and by hefting or lifting the back end of the whole hive. Of course, if you pick out the sentence at the head of the first column, page 776, you might infer that the diagnosis was made solely on the indications at the entrance; but the next sentence and all the rest of the article shows that we used every means available without resorting to lifting out the individual frames. It takes but a small fraction of a minute to heft a hive or to tilt up a super, the entire diagnosis not taking up much more than the fraction of a minute.—ED.]

BEEKEEPING IN CALIFORNIA

P. C. Chadwick, Redlands, Cal.



The first general rain of the season is falling today (Sept. 30).

I was glad to have Mr. Frank E. Cliff, page 614, July 15, verify my comments as to the handling of honey, by the employes of the Postoffice Department. The reading of Mr. Cliff's article will be well worth the time.

Mr. Doolittle's article on the middlemen, page 782, Sept. 1, is timely and to the point. The fact of the matter is that there must be a middleman, and if the beekeeper thru the medium of organization is not ready to fill the gap it will continue to be filled by one who exacts a profit for his labor.

Our annual weather records are computed from July 1 and all rain is figured from that date. Up to this date (Sept. 27) we have had in this city an inch as measured by official records, yet the value to the beekeepers of this amount, falling as it has during the summer months, amounts to practically nothing as a factor on next year's crop.

J. L. Byer says, page 780, Sept. 1. "If there is anything to be made in any business, the man who stays with the job is the one who will win out in the end"—and he is right. My father spoke these words to me twenty-five years ago and he won out. However he was later nearly ruined financially by the great Kaw Valley flood of 1903.

It seems I owe Mr. M. J. Meeker, our county inspector, an apology, in that I quoted him as favoring the caging of queens in the treatment of black or European foul brood. Instead he informs me he is opposed to the caging of queens in the treatment of this disease, giving as his reason that a queen not showing sufficient strength of stock to resist the disease in the start is not worth any future trials against the disease. His reasoning is backed by experiments, and to most of us must seem logical. I am pleased to make this correction as I confused his conversation with that of another party.

IMPERIAL VALLEY'S PECULIAR SEASON.

I am handed some notes taken by a friend during a conversation with Mr. J. W. George relative to conditions in the Imperial

Valley, which I herewith present with a few remarks of my own. According to Mr. George there are several conditions that have worked against the success of the beekeepers of that section during the past season. A change of climate is given as one cause, but I am of the opinion it should not be termed a change of climate so much as a peculiar season, which has been the case on this side of the range. There was an increase in the acreage of cotton and consequently a decrease in the acreage of alfalfa; a shortage of water for irrigation purposes, causing a lighter secretion of nectar; grasshoppers; a warm early season with a short flow, followed by cold, reducing the bee force greatly. Mr. George says that the average per colony will not exceed 60 pounds, the normal yield being from 120 to 180.

THE END OF THE SEASON.

With the close of this month (September) the season of 1916 may be said to have closed. It is possible there may be a few localities where a light flow of surplus may be gathered, but they are few and far between. In southern California as a rule the season has been a sad disappointment, and this is also true of the central and northern valleys to a large extent. Inyo County seems to have been favored by a good crop if all reports are true, while the Imperial country is by far below its usual output. In this part of the state the early prospects were never better up to the first of March, but at this time the rain stopped short, and we were the victims of warm dry weather that shortened our crop materially. So we now start thru another winter with high hopes that only a beekeeper can possess. When a beekeeper loses hope it is equivalent to an apiary for sale or the beginning of a run-down yard that no one would pay much for.

[Early in the season, the prospects for a big yield in California were never better. The rains had been coming on just right; and had it not been for the hot dry winds there is every probability that there would have been a big yield. The shortage of the crop in California and other parts of the West has offset the big crop in the East in the clover region. Had there been a large yield in the West as well as in the East, prices certainly would have taken a tumble. As it is, they are nearly holding their own in the East, and are more than holding their own in the West.—Ed.]

J. E. Crane

SIFTINGS

Middlebury, Vt.



A good-looking lot is that class in beekeeping at the Ontario Agricultural College summer school, page 800, Sept. 1. I notice nearly half of them are women.

Very little surplus honey was gathered here in Vermont in August. Honey crop is rather poor except in one county, where it is very good.

I have heard, at one time or another, a good deal about the "king-bee," but never expected to see one. But here is the next thing to it, on p. 795, Sept. 1, a real "Bee King." Glad to make his acquaintance.

The method employed by A. E. Ault, of Bradentown, Fla., as given on page 807, Sept. 1, for making increase, is a most excellent one, as it leaves few or no weak colonies to be built up later. It also helps in keeping down swarming.

Dr. Miller, I am interested in the advice you give Wesley Foster, page 677, Sept. 1, in regard to the use of honey. You say, "I would like to have you live longer." Are we to understand that the moderate use of sugar will shorten a man's life, or that the use of honey will lengthen it?

That is an important point made by the editor, page 468, that honey kept at a temperature of 130° for two or three days is much less liable to granulate than when raised to 160° for a short time. Is it not also true that honey is much less liable to granulate if it is warmed and bottled before it has first granulated?

Mr. H. H. Kollister's method of securing straight combs by the use of a sharp triangular top-bar, page 737, Aug. 15, takes one back thirty-five or forty years, when we used them, and we found it was a great help if the rear of the hive was raised a few inches. There was less danger of their jumping from one frame to another.

Page 719, Aug. 15, Mr. Doolittle says, "I am sure that every beginner will do well if he removes the largest patches of drone comb in all his hives, replacing them with worker comb except in such colonies as are set apart as breeders." Few persons have

any very pronounced ideas on this subject. I am often surprised at the large amount of drone comb I find in the hives of those thought to be pretty good beekeepers, and sometimes almost in the center of the brood-chamber.

We are reminded these days of that beautiful parable of our Lord on preparedness. He said that ten virgins went to attend a wedding. All took lamps or torches with them, for the wedding was to be at night. Five were thoughtful, and took a supply of oil as well as lamps. The others did not think they would need any oil. "How foolish!" we say; but how like a multitude of beekeepers! So we have at this season requests for a little foundation. Another wants a few hundred or a few thousand sections, and perhaps another a hive at once for their one lone colony has just swarmed. How foolish to keep bees, and not be prepared to supply them with what is needful for success!

Prof. Baldwin, in his department for July 1, relates his experience in introducing queens by that old plan called the "honey method." It seems really surprising that he should be able by this method to remove an old queen and introduce a virgin at once successfully. If this can be done, and not fail more than one time in ten, it will prove of great value in superseding old queens during spring or early summer. If one has the conveniences for introducing in this way it need not be very fussy nor take a great amount of time. I find in trying to introduce again in this way that it is a little difficult to roll a queen in thick honey. Perhaps the temperature of Florida would make it thin enough, but I suspect a little thinning would be better for our climate if we try to work rapidly.

SUPERS ENOUGH FOR A WHOLE YARD.

That auto truck as pictured on page 733, Aug. 15, certainly looks pretty good. As we have been using one for six or eight weeks I can give my testimony that it is a good thing for out-apiaries. Where yards are ten or twelve miles away it saves lots of time. How nice to take supers enough for a whole yard and all the help needed at one load, and then to get there in a quarter of the time required by a horse! and then to be able to take off a ton or more of honey and bring it all home the same day!

SELECTING THE BREEDER.

P. C. Chadwick, page 718, Aug. 15, gives some rules for selecting a breeding queen. This is a matter of more importance than we have been accustomed to think—of more importance, I believe, than is the breeding of domestic animals or birds. Years are required to change a herd of dairy cows, while a yard of one hundred colonies of bees may be changed in a single season.

* * *

THE SHAKEN SWARM IN THIS LOCALITY.

"Here is what happens in this locality when the shaken-swarm plan is practiced," says Wm. Beucus, page 736, Aug. 15. "If shaken on to starters, almost certain absconding; if shaken on to full sheets, very much less absconding; if shaken on to a set of clean, sweet-smelling worker combs, no absconding whatever." Now, this is doubtless true to some extent in most places, tho not as bad as in his "locality." Bees seem especially inclined to abscond when shaken on to a full set of frames of foundation. We found, the past season, that if one or two frames of drawn combs are given with a hive full of foundation it will usually hold them; in fact, I think it answers about as well as a hive full of combs.

* * *

PUT THE BLAME IN THE RIGHT PLACE.

We sometimes wonder why the flowers do not yield more honey—why the bees should often find it necessary to visit many hundreds of flowers to secure a load of nectar. Too often we forget that the object of the secretion of nectar is to secure cross-fertilization; and if the amount were large a load would be found in a few flowers; but if only a small amount is found in each flower a large number must be visited, and thus the pollen scattered over a wide area. A bee finding a scanty yield of nectar in the flowers of one apple-tree naturally flies to another; and by so doing it gives us the best kind of cross-fertilization.

* * *

CARROT HONEY!

Long ago an old pessimistic preacher declared there was "nothing new under the sun." We can excuse him, perhaps, for he did live in a rather slow age. Had he lived in this age of steam and electricity, of automobiles and flying-machines, I think he would have thought there were many new things under the sun. Even in beekeeping there is something new to learn each year; and I have seen something new recently. One of our helpers reported in August see-

ing bees working on wild carrot, gathering honey. "Impossible!" I said. "Bees do not work on that plant. It isn't in the catalog of honey-plants in the A B C and X Y Z." Then another reported seeing bees at work on it. I had noticed the bees in our home yard were storing a little in brood-chambers. Then I went and looked myself, and, sure enough, there were the bees walking around on the great flat umbels of this plant, lapping up the atoms of nectar.

* * *

JUST WHAT IS THE CAUSE OF SWARMING?

There are few things we would more like to know positively and accurately than the cause of swarming. Mr. J. E. Hand, page 599, July 15, gives his views, some of which do not seem to correspond with our experience among the bees. He says, "Give me a queen of undiminished fecundity and I will show you a non-swarming colony." This year we have had many colonies swarm with young queens that have been laying but a short time. Indeed, a young vigorous queen seemed but poor protection against swarming.

Mr. Hand further says, "Queen-cells are inseparably associated with swarming." We have found colonies repeatedly swarming without a trace of queen-cells upon the combs of their hives. He gives us to understand that queen-cells are started largely for the purpose of superseding the queen; that the queen cares little for them until they are sealed, and then she is so put out that there is a sort of insurrection in the hive, and out go the bees. And yet we often find the queen among the last to leave the hive. More, we often find them swarming before the oldest queen-cell is sealed. If sealed queen-cells were the cause of the trouble we should only have to see that there were no sealed cells until the queen had regained her fecundity to prevent all swarming, yet this is no sure method of prevention.

He also tells us that the queen "cannot control egg production," and that a queen will scatter her eggs over the combs of a small hive and become exhausted sooner than in a large hive. This does not harmonize with my experience.

If Mr. Hand's theories are correct, why is it that bees swarm less in hives well ventilated than in hot poorly ventilated hives? Is the fecundity of the queen greater in such hives, so that she can keep right on thru the season? Is the fecundity of the queen greater in seasons of scarcity when few swarms issue than in seasons of abundance? We know the amount of brood in such seasons is far less.

E. G. Baldwin

FLORIDA SUNSHINE

Deland, Fla.



Bees seem to be in unusually fine condition this fall all over Florida. Rains have been plentiful but not severe, encouraging vegetation, but still allowing bees fair weather for gathering.

* * *

How many in our land of sunshine have ever planted or grown to flowering size either the *Bigonia venusta* and the *Antigonon leptopus* or Mexican pinkvine? They will pay well for the beauty, and the bees are "crazy" over them. The latter blooms from May to frost, the former only in early spring, but both are a riot of color.

* * *

SWEET CLOVER AND ALFALFA IN FLORIDA.

Several inquiries have come in regard to sweet clover in Florida. So far as I know, sweet clover has not been acclimated in this state. I can only hope that it may be at some future date. If the government experts can succeed in discovering a species or variety of sweet clover that will grow in a warm moist climate in sandy soils, it is *sure* that Florida will be doubly valuable as a honey or forage state. They sent the alfalfa line north from about Denver to Canada, and into Canada; and why may they not sweep the land of the floral dial away to the Southland, for both sweet and alfalfa clovers? Alfalfa is growing to a slight degree already along the drainage canals of the east coast in St. John's Co. But it is as yet very limited in area, and lives only three years. Then it dies and must be replanted. Probably it gets "wet feet" by its roots reaching water level.

* * *

FINAL NOTES ON THE HONEY CROP.

Honey-crop reports for the state are now pretty well in. Orange was poor in quantity and quality; saw palmetto only about a third of a crop; mangrove the same; but cabbage palmetto was a surprise. It not unusually ends by July 20; but this year bees were gathering from it as late as Aug. 14. In most locations the honey from the cabbage palmetto is mixed by the bees with other honeys—for instance, on the east coast with mangrove. But it is secured in almost its original and pristine purity on the west coast between Bradentown and Fort Myers. Pennyroyal will soon begin blooming in the southern portions of the peninsula. Partridge-pea honey is quite abundant in the high pine sections; but it is always dark-red, strong in flavor, and unde-

sirable as a table honey. In the tupelo sections our correspondents indicate a good flow from the tupelo, but poor from the ti-ti. Taking the state as a whole, I should say the season of 1916 has been about an *average*, perhaps slightly below.

Apropos of the honey from the cabbage palmetto (*Sabal palmetto*) referred to above, we might mention a letter received from a beekeeper in the southern half of the state. He writes of that honey: "The less I have of it the better I like it. It may be some other tree, flower, or shrub that blooms at the same time that yields the worst honey I get. It is so thin it runs like water; and, when first uncapped, often bubbles like gas in all the cells. It is acrid and very acid, tho nice-colored." I am sure our correspondent is "getting his mixed." The clear color, the thinness, the bubbles, all prove cabbage palmetto. These three qualities inhere in no other one honey in Florida, so far as I can determine. But the acidity and acridness—no! No honey has less of both qualities than cabbage palmetto. In fact, it is, when pure, the purest and mildest honey in the state; and, tho thin, it is delicious in every way. The bubbling when first uncapped is very characteristic of this honey; but it is not due to fermentation, and all bubbles disappear on extracting the honey. They show only in the cells just after they are uncapped. Therefore our correspondent's bees *must* be gathering some other clear but pungent honey at the same time that they gather from the cabbage palmetto. What it is I have no data for determining.

* * *

NECTAR FROM COW PEAS.

Another apiarist, writing from Fort Ogden, Fla., wishes to know what it is that his bees gather from cow peas. He says he never sees the bees on the blossoms, but only at the base of the pod where it joins the stem. In the case of certain plants the bees gather nectar, not from the blossoms, but from the stem bases. For example, the *Cassia chammachrista*, or sensitive pea, this year the bees seemed to work on the blossoms in the early morning, on only the stem bases and leaf bases of the stalks later in the day. Usually they work not at all on the blossoms. But I have not heard it said or noticed personally that they do not work on the blossoms of the cow peas. It may be that our correspondent's bees are gathering the secretions of certain aphides or plant-lice, tho it is possible that the cow pea also secretes nectar at the pod-bases.

BEEKEEPING IN THE SOUTHWEST

Louis H. Scholl, New Braunfels, Texas



The gasoline age is beginning to benefit the beekeeper more and more. Altho a number of beekeepers have taken advantage of the use of motor vehicles of some type or other for a number of years past it has been during only the last two years that they were more abundantly adopted for apiary work. Inquiries have been coming from quite a number of beekeepers contemplating the purchase of an automobile or truck for beework, and desiring certain information regarding them before making the purchase. This indicates a still greater use of the auto during the coming years.

For the small beekeeper the larger, heavier, and more expensive auto trucks do not seem to be as practical as some of the lighter machines. There are some who differ with me on this question; but after a trial with both kinds, together with a thoro study of the two in my own apiary work, my conclusion is that more can be accomplished with two half-ton trucks than with a one-ton truck. This is especially true where a large number of apiaries must be visited frequently. In fact, a great deal of the running around to the apiaries can be done far more economically than with a larger and more expensive machine. I still favor two Fords over any other kind of machines for our work.

CO-OPERATION IN TEXAS.

Co-operation and organization have been uppermost in my mind for many years, and the readers will remember that I have called attention to this important question quite frequently in these columns. I believe thoroly in a united effort of the beekeepers toward a better marketing of their products. It not only helps them but everybody else who is dependent upon them. Let the beekeepers get a good price for their product, and not only they will thrive, but the supply-dealer, the manufacturer, and everybody else who trades with the beekeepers will thrive. For this reason all these interests should lend a helping hand where beekeepers are endeavoring to band themselves together for the purpose of making their vocation a more profitable one, not only to themselves but for all concerned. We are trying to do this very thing in Texas today,

and it is my sincere wish that the efforts on the part of the Texas beekeepers in this direction may be crowned with success.

While Texas honey prices were anything but satisfactory a little over a month ago, we are getting better prices now. The market is much more steady, and the demand is keener. All this occurred in spite of the information that there were still great quantities of honey in the hands of numerous large producers, together with the approach of the autumn months and cool weather during which the sale of honey is usually curtailed. Extracted honey, too, is on a firmer basis at this time than it has been for a number of years, and the supply has been rapidly decreasing.

Information about the cause that has brought this condition about is lacking. Perhaps none of us have thought about it seriously enough to ascertain the real cause. Perhaps it may be attributed to the general spell of prosperity that has spread over the country. Even if this be true I cannot help but feel that our efforts to organize ourselves for better marketing of our honey and other products has already had its effect in that the beekeepers were awakened and just simply quit throwing their honey away at low prices. They are all asking more for their honey now than before the agitation of organizing began. Let's keep the good work going.

SOME DIFFERENCES BETWEEN THE NORTH AND SOUTH.

It sounds rather strange to read on page 838, under "Honey Crop Conditions and Prices," the following sentence: "As soon as the crop begins to pour into the market we shall be able to get more definite information"—strange because here in the South we have been pouring our honey into the market ever since April and May, and at this time are just about "winding up the season" with what scattering lots of honey there may still be left unsold. There does not seem to be any large quantity of this, and the demand is keener than it has been for some time. It is doubtful whether any honey will have to be carried over the winter, and the usual winter and very early spring trade in honey that has been created during the last few years will have to go begging for want of a supply.

CONVERSATIONS WITH DOOLITTLE

At Borodino, New York



BE SURE TO HAVE ENOUGH.

"What is the quantity of stores needed by a colony of bees during the winter?"

There have been various estimates at different times by different writers, the amounts ranging from 7 to 35 pounds. This question is surely of some importance to beekeepers, for, if an average colony of bees may be wintered safely on 7 lbs. of honey, it is of no use to let them consume any more, and we might as well save the 28 lbs. of the higher estimate. But from past experience I have found that scanty stores often prove a nuisance, in that it is better to have more stores than the bees consume than to be obliged to feed in early spring.

"But suppose we call the amount 18 lbs., or half of the higher estimate—how would that do?"

I am not sure but that it might be a mistake to set down any stated amount as absolutely and exactly sufficient, for the reasons that colonies not only differ in numbers, age of bees, etc., but winters also differ in duration, in suddenness of changes, high winds, etc., and the number of sunshiny days or stormy days even have some influence on the question.

Colonies which are wintered in the cellar consume less honey than those wintered out of doors; but in localities where the winters are comparatively mild, if the bees are strong in the fall the difference between outdoor and indoor wintering is not so great as some would have us think. Most beekeepers agree that comparatively weak colonies will consume more stores according to their numbers than the more powerful ones, owing to the necessity of producing heat thru the consumption of stores. For this reason some contend that it is undoubtedly better to winter the weak colonies in the cellar and the populous ones out of doors. I have had colonies which would consume in the cellar only a pound of stores a month, and come thru in the best condition, while another colony in the same row, and apparently having the same number of bees and in the same condition, would consume from three to four pounds a month. To have limited all to a winter's store of one pound a month would show the short-sightedness of any apiarist.

"But, all things being equal, is it best to leave a strong average colony a large amount of honey, say 30 to 35 lbs.?"

I hold to the larger supply, even tho the

quantity left in excess after wintering might constitute a sufficient amount to cause some to think if it had been sold it would have paid for an ordinary season's management. Those advocating a small amount of winter stores depend upon feeding in early spring to keep the colony along; but from years of experience along this early spring feeding I have found that we are quite likely to be caught in March or early April with a spell of a week or ten days of real winter weather, during which the bees will often fail to go after the feed; and the result is starved colonies or colonies greatly injured by the loss of brood thru a fear of starvation from a too scanty supply. Those advocating the short supply of stores for winter seem to think that brood-rearing can be made to forge ahead much faster by feeding the bees half a pint of thin sweet every day than by any other method; but from experiments along this line for many years I can only think that such is a mistaken idea. By setting apart 20 or 40 colonies and feeding half of them while the other half were left rich in stores from the previous season, but without feeding, and then comparing notes regarding each half the unbiased mind can prove the real truth in this matter. And if we stint our bees without any feeding we compel them to reduce brood-rearing. Any colony which has not enough stores to make the bees feel "rich," or to feel that there is a great plenty ahead, will be much less prone to breed the latter part of March or in April, just at the time an abundance of brood should be started if we are to secure the best results in the early clover harvest. The apiarist who is so fond of his bees that he is willing to go thru with the buying of the feed and the labor of feeding every day, or who will not pass three days without examining them, may be able to remedy any shortage in good time and feed when he sees it necessary; but to those who make bee culture a matter of earnings, and who have also other things to occupy their minds, it seems far preferable to leave the supply largely sufficient in October, and trust in the wisdom of our pets as to the use of that more than sufficient supply.

Of one thing I am sure: None of the honey will be wasted if the colony winters successfully; and an abundant supply, as a rule, tends toward successful wintering. Successful wintering of a colony rich in stores will give a "stronger army" for the honey season than if their stores are controlled and scantily supplied.

GENERAL CORRESPONDENCE

THE RELATION OF TEMPERATURE TO BEE ACTIVITY

BY ALLEN LATHAM

It is doubtful if any form of life is more sensitive to temperature and temperature changes than is the honeybee. This is shown in comb-building, honey-gathering, and in brood-rearing. Only at the most favorable temperature do we see these activities carried on at their best.

It is almost impossible for comb-building to go on with the temperature below 90 or so. Comb built at a lower temperature is not the well-formed and delicate structure constructed under the higher temperature. It is irregular, and heavier. Likewise a temperature above 100 interrupts comb-building. Thus we see the bees when comb-building is in progress striving to keep the hive, or at least that portion where the building is going on, at the desired temperature—carrying on a vigorous ventilation if the hive is too warm, and crowding together to furnish heat when more heat is desired. Few of us but have welcomed the glad sight of hosts of young bees migrating into the supers.

Many of us like to diagnose the condition of the colony from the outside. The flight of the bees tells us much but not all. Lifting the cushion and running the hand over the inner cover or over the mat, as the case may be, will tell much more. It will render a very close estimate of the size of the brood-nest if the super be not yet in place; and if super is in place it will tell to what extent it is occupied. It will not, of course, tell to what extent the super is filled with honey.

This explains why it is so essential to have a large force of bees in comb-honey production. At the present date, Sept. 22, I am enjoying the most remarkable fall flow I have ever known. Goldenrod and asters are profusely abundant, and are holding out unusually long. Yet with this tremendous flow of honey the work in the supers is very slow. Had the bees their July numbers, work would be going on in three and four supers at full blast, instead of slowly in one super. Under present conditions the brood-nest is rapidly disappearing, and the brood-combs are becoming solid slabs of honey. The chief factor to bring this about is temperature, the cold nights sending the bees away from the supers and outer portions of the hive and bringing on a more and more restricted area where the temperature is kept up to the point for

wax-working. As the season comes to a close there will be considerable comb left unsealed, the last honey gathered being left in open cells, the bees not being stimulated to raising the temperature to the necessary point for that work.

We are all familiar with the effect of temperature changes upon honey-gathering. The bees may be booming when the thermometer suddenly registers a fall of ten degrees. The boom is off. Frequently this is because the flowers cease to secrete the nectar; but if the temperature was already rather low, and some flowers like goldenrod secreted at a rather low temperature, the fall in temperature simply stiffens up the bee. She will no longer go to the field, even tho there is nectar to gather.

Brood-rearing progresses only as the force of bees can warm up more comb and keep it warm. Queens will sometimes lay in comb not up to the desired temperature; but the brood will not mature. Whenever a cold night causes the bees to draw away from the outer portions of their extended brood-nest it is a serious setback, for the bees are slow in warming up that comb again.

Warmth attracts bees. Combs attract bees. Warm combs are doubly attractive to bees. I have not investigated to what extent it would be worth while to warm up frames of comb before giving them to a colony, but years ago I discovered the vast advantage of feeding warm syrup over feeding cold syrup. It will be noted at this point why failure so often attends the spreading of brood in the spring. The difficulty is often that the increased comb surface is too much for the force of bees to keep warm, but more often the difficulty is the failure of the bees ever to warm the new comb. Hence the brood-nest becomes two separate units instead of one. Then the one which does not contain the queen rapidly deteriorates, with the result that the brood-nest, after a week or so is actually smaller than it was before the spreading. Breaking the cap-pings of what sealed honey is in the comb will help much; but it would be far better to put that comb in a very warm room and let it stay there till warmed thru before giving to the bees. If one wishes to force his bees in spring let him warm up a number of combs of honey. Remove an outer comb of a colony; move over the combs till

the brood-nest is split, then insert a warm comb. Proceed thus till the warmed combs are used up, then take the combs that have been removed into the warm room, and, after they are thoroly warmed, give them to other colonies in like manner. This is a safe and sane procedure, but must not be done recklessly. If the cappings are broken these inserted combs will almost always show freshly laid eggs the following day.

Too high a temperature is not conducive to good results in brood-rearing. That side of the hive exposed to the sunshine will show a comb well stocked with brood in the spring months; but, likely as not, in July it will show little or no brood. The spring sunshine attracted, but the summer sunshine repelled. The double-walled hive has the advantage here. The newly hived swarm is likely to desert its hive if it is summer, and that hive stands exposed to sunshine. On the other hand, if the day is cool a swarm will run pell-mell into a warm hive, while it will almost refuse to go into a cold one. If a swarm has stayed out over night and

is sluggish with cold, try hiving it in a hive which has been well warmed. The rule works both ways, and so we like a cool hive for the hot swarm of the sunny mid-day.

The queen-breeder, too, does well to bear the matter of temperature in mind. Cell cups which have been allowed to become cold are less likely to be accepted, and the queens are likely to be second rate in quality. See that the grafted cups are well warmed before they are returned to the hive. It is my practice to fold a newspaper about the prepared frame before exposing it to the outer air while carrying it to the hive. It is my belief that many failures to get good queens are due to lack of care in this respect. It is true that bees will rear queens under adverse conditions, and so will cows give milk, and hens lay eggs. But profitable queen-rearing, like profitable milk and egg production, calls for thoughtful methods. It will not be time wasted for many of the readers of this paper to put much thought upon the matter of temperature and bee activity.

Norwich, Ct.

WESTERN NEW YORK FIELD MEETING

BY "ONE WHO WAS THERE."

The basket picnic and field meeting of the Western New York Honey-producers' Association, which was held at the home and apiary of Mr. Roy Wisterman, at Dysinger's Corners, N. Y., was a decided success. While Mr. Wisterman does not claim to be a professional beekeeper, he finds it a profitable addition to his extensive farming operations. He says he does not know very much; but one has only to look at some of the fine queens which he reared by the grafting process to know that he is no backlotter at the beekeeping industry.

Lunch was served on tables erected on the spacious lawn by the wives of the beekeepers. The word "lunch" does not do justice, tho, to the "eats" that were served.

After lunch several subjects were taken up. Mr. J. Roy Lincoln, of Niagara Falls, spoke on "The Management of Bees in an Out-apiary." Shortly before fruit-bloom he unpacks his bees and clips his queens. He also gives a super which in reality is another body, as he uses full-depth bodies all thru. Shortly after fruit-bloom, or while it is still on, he places a frame of brood from the lower story in this super. He leaves them thus until the fore part of June, or until clover starts, when he takes one frame of brood and two frames containing

the most honey, and places them in another body—the brood in the center and the honey on the outside, and the rest of the hive filled with empty combs or foundation. This body is now placed on the bottom-board with an excluder over it, and the brood placed on top. The bees are brushed off the combs with a Coggs-hall bee-brush in order to find the queen. (This is the easier way when there is such an army of bees.) The queen is placed in the lower story with the one frame of brood, and the remaining brood is placed over the excluder to hatch out. The combs are then store combs. If more supers are needed they are added under the brood-combs or directly over the excluder. Ten days later any queen-cells that may have been started are removed; or if increase is desired they are set on a new stand; or an upper entrance is given for the queens to mate.

In this way swarming is entirely controlled. The secret is to get the queen to lay in both stories, and so use up any dark honey that may be left from the preceding season. As these combs are used for store comb after the brood hatches, it is desirable to get rid of all dark honey.

The drones are also controlled. Being over the excluder they cannot escape, and



Western New York field meeting at Dysinger's Corners, August 12.

are killed by the bees. They fall down on the excluder, but never plug the openings by so doing. Plenty of drone comb is placed in desirable colonies to rear the drones to make sure of having good ones.

Mr. Lincoln says that he can manipulate 50 colonies a day by the foregoing method. He uses eight frames in a ten-frame super, and extracts at the end of the flow.

Mr. William Vollmer, of Akron, N. Y., told of his varied experience in buying bees in combless packages from the South. In case of the one-pound package with queen, he thinks it is advisable to put the bees on empty combs with a frame of brood, if they are received early in May, in order to make them a remunerative proposition. With the two-pound package it is also advisable to give a frame of brood, but the combs are not quite so essential. The two-pound package generally makes sufficient honey the first season to pay for itself; and as far as honey is concerned, therefore, is a better investment. Of course, if increase only is desired the first season, the smaller package is better.

Mr. Vollmer prefers a roomy package and a good candy to ship well. Combs of honey are not satisfactory. They melt down and daub the bees, making them worthless.

Cheap queens are usually dear at any price. The bees are not so important, except they should be young. If blacks or hybrids they should be forced thru an excluder to get rid of the undesirable drones.

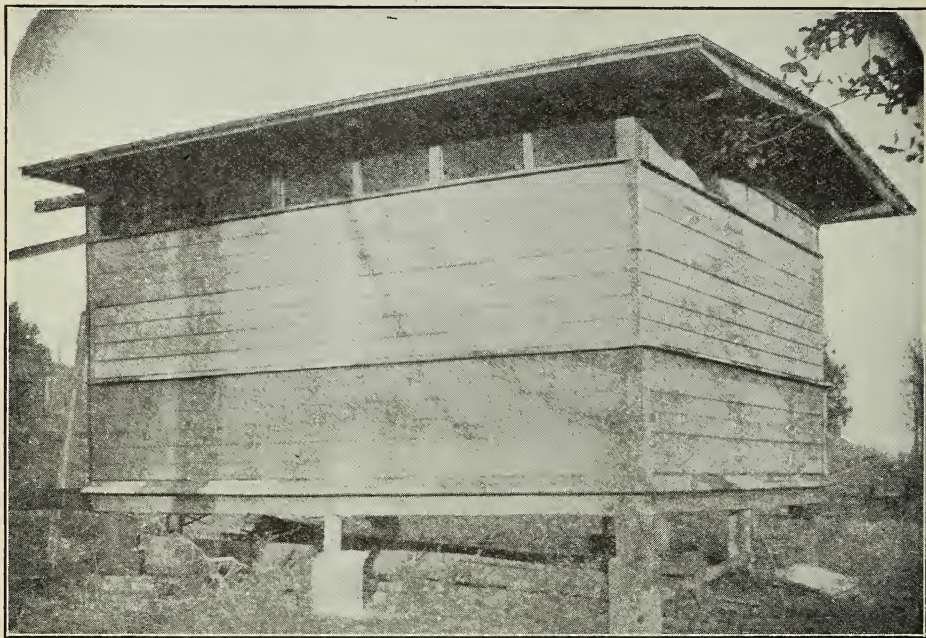
Some beekeepers make a practice of buying young swarms for increase. This is also a good plan if the stock is desirable; but if one takes into consideration the extra time and labor involved in getting one, two,

or more at a time, instead of having all come at once, as is the case when packages of bees are shipped in, there is not much difference, tho the young swarms are usually the cheaper.

Mr. John DeMuth, of Pembroke, N. Y., told of his experience with European foul brood. The beekeeper must first eliminate the black bees or the disease will do it for him. A good strain of Italians is a great help in holding it in check; but some strains are almost as susceptible as blacks. Caging queens for a period sometimes effects a cure. Killing old queens and giving young vigorous ones is another method. Where foul brood prevails it is hard to rear queens, so they had better be bought from some reliable breeder whose stock has shown good resistant qualities.

Mr. DeMuth does not think it necessary to melt up combs that have contained European foul brood. He merely puts them above an excluder over a strong colony to be cleaned up. This disease is like other diseases. It seems to diminish after being in a locality two or three years, and gradually wears itself down somewhat. Mr. DeMuth has visited a large number of beekeepers in the western end of the state, and they all report a small amount of disease, especially where it is in the locality. Most of them treat it by one of the foregoing methods, and consider it the same as a weed in the garden. Eradicate it this year and you may not have any next, or you may. With a little help it can be held in check so as not to be as serious as might otherwise be expected.

When selling honey at home to the neighbors Mr. Vollmer recommended asking the



C. L. Hill's house-apiary. Light and ventilation are provided by the 12-inch opening on three sides covered with screen. There are two tiers of hives, the entrances being painted in different colors.

full price. If one feels inclined to give away any, give it outright. In this way if any one asks the price of honey only one price is given, and the beekeeper will not

be accused of having two prices, a thing which will not do if one intends to do any amount of business.

Akron, N. Y.

MY HOUSE APIARY

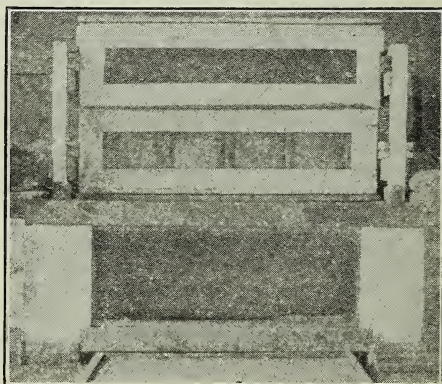
BY C. L. HILL

From my experience of the last three years with a house apiary I consider this plan of keeping bees far superior to the individual stands out of doors.

On three sides of my building, just under the eaves, is an opening 12 inches wide covered with rustless screen. The hives are located on the floor, and there is also another tier of hives three feet above the lower tier, all having entrances thru the wall. The entrances outside are painted different colors.

The hives are formed by partitioning off the space into compartments like bins long enough to take frames lengthwise. The "bins" are deep enough to hold eleven frames.

The floor boards may be withdrawn for cleaning. There is enough space between the upper and lower tiers of hives to permit



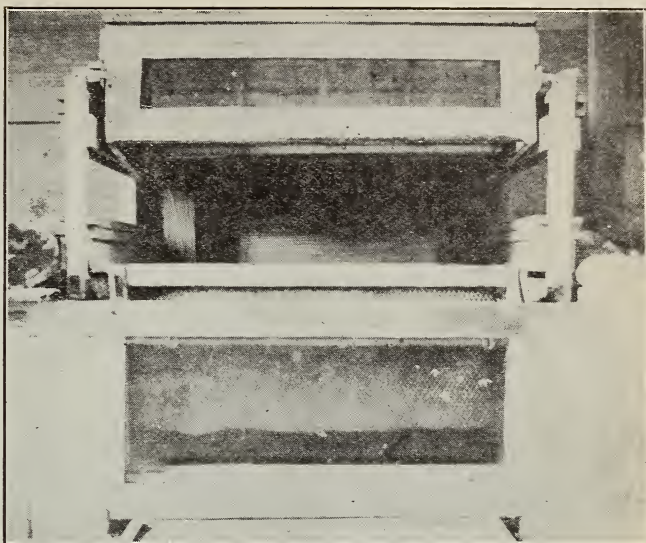
Two glass-fronted supers in position over the brood-chamber. In a house apiary supers may be made of thin material as there is no exposure to the weather.

two supers over the lower brood-chambers. I have it so arranged that the upper supers are held by supports so that the lower supers may be removed without disturbing the upper ones.

The colonies winter excellently with nothing over the hives except very thin covers and blankets to retain the heat. The combs are always dry, and there is never any mold nor dampness whatever.

Later on we expect to start a number of out-apiaries with these buildings which permit us to handle bees at any time, rain or shine.

May's Landing, N. J.



The supers are independently supported. The under one may be withdrawn if desired.

HOLLAND HONEY AND HONEY CROPS

BY J. H. J. HAMELBERG

The majority of our beekeepers still using the skep, it is not to be wondered that extractors are not very often found in this country. The combs, cut out of skeps, not being in frames, could be extracted only by improvising some device to hold them in position in the extractor. This would entail a considerable amount of labor, to say nothing of the time it would take to uncup these combs of all shapes and forms. Consequently our beekeepers use other ways to get the honey out of their combs; and the products obtained by these methods are distinguished by "leak" and "press" honey, the former being the honey which drains (leaks) from the combs while stored in some vessel, the latter being obtained by putting the combs under a press very similar to a wax-press. This press honey is, of course, much inferior to the drained honey, as it always contains pollen, and, unless the beekeeper has been very careful, the juice of brood and dead bees as well. But it is excellent for feeding purposes, and it also seems to answer very well for making cakes, as our bakers buy it readily. A good many beekeepers, however, sell their honey in bulk as chunk honey.

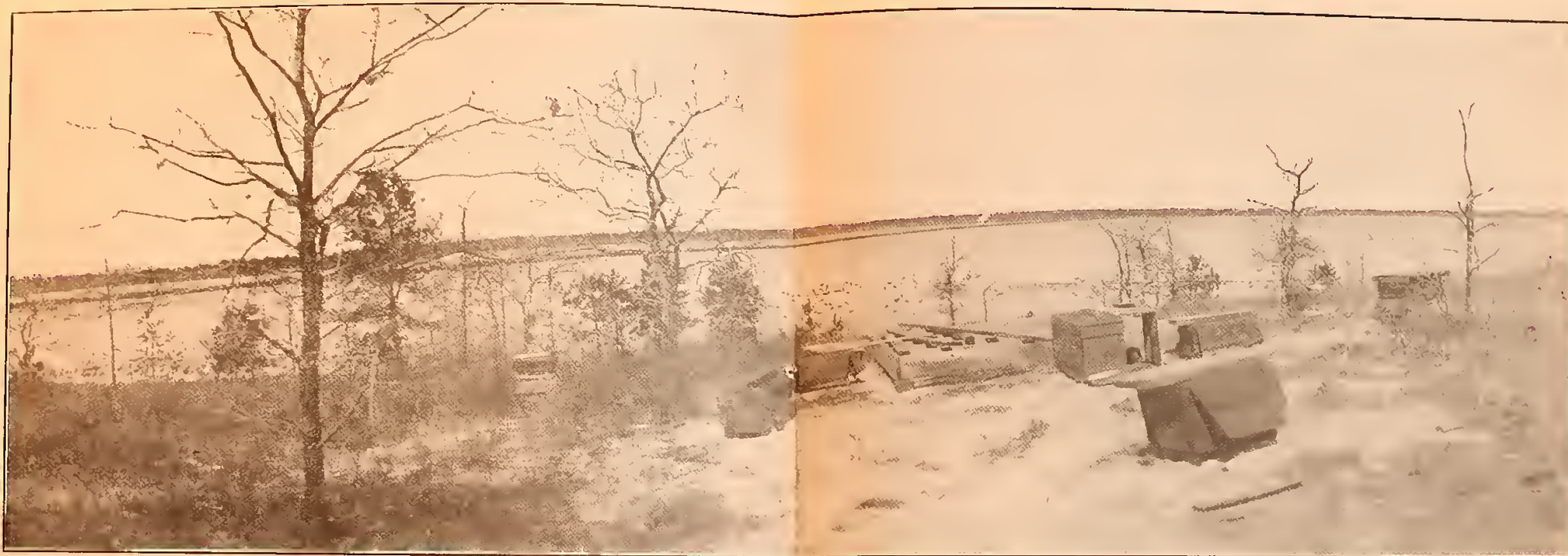
The comb honey and the extracted honey on our markets are furnished by our modern apiaries. It has been contended that there

are a few beekeepers in this country who import American or West Indian extracted honey by the barrel, selling it afterward for "pure inland;" but for the truth of this I cannot vouch. When looking over the shipping-lists of vessels having entered from American or West Indian ports, one often finds an item of so many barrels of honey, but no one ever seems to have taken the trouble to trace the destination of such imported honey, for which reason it would be unfair to charge our beekeepers with the above implied fraud.

It cannot be said that we are a honey-eating people, as, for instance, are the Swiss. As yet very little honey is consumed by the laboring and middle classes, it still being considered somewhat as a luxury for the table of the rich. But then, very little has been done until now to point out to the people the value of honey as a food.

Our extracted honey is put up in glass jars of $\frac{1}{4}$, $\frac{1}{2}$, or 1 kilogram, and of late fancy jars have also come in use, as, for instance, in the shape and color of a straw skep. The half-kilogram jars (1.1 lb.) are most popular, and are sold by retail for 30 to 40 cts. each.

Chunk honey is better appreciated by our honey-consumers than comb honey in sections; but a good many people prefer the



A location for an apiary chosen by C. L. Hill, of May's Landing, N. J. Bees here are in reach of the cranberry-bogs.

extracted honey for table use. Very likely our national feeling for cleanliness has something to do with these preferences. Chunk honey is mostly produced by our skep-keepers, and they can readily sell it to buyers in their neighborhood, once they have a good reputation for cleanliness and honesty. Our modern apiaries advertise their product, and fill the orders they get, but they don't peddle their honey. One may buy it at a grocery; but it does not appeal to our feelings to see sections, however beautifully filled, exposed to the dust and the flies before a grocer's windows.

As to our honey crops, they remain far below those obtained by some apiarists in the United States—for example, Dr. Miller, I have his very valuable work in which he describes his forty years' experience, and I have studied it rather closely. But there never has been any question about my obtaining the crop that this American veteran gets from even weak colonies or what he considers as such.

We have good seasons and bad ones, altho more of the latter. But even in a very good season I would be very well satisfied if my bees gave me an average of 75 lbs. per colony, and, as to an average of 150 lbs. or more, I don't even dream of it.

Altho we have the linden, white clover, buckwheat, and some other good honey-plants, one does not see in this country acres and acres of them, as seems to be the case in the United States. On our poorer soils one may encounter patches of a few acres of buckwheat; but of the hundreds of acres of this grain on a stretch, by which, for instance, the late Mr. Alexander was surrounded, we cannot form an idea. Such stretches of land with only *one* honey-giving plant are to be found here only on the heaths; but then, heather honey is a rather ill-flavored and very dark-colored product which is disliked by many.

Alfalfa and sweet clovers are not cultivated in this country, and we thus miss two great honey sources. But still I think our bad seasons are not caused so much by the want of bee-pasture as by our changeable climate. When I read sometimes in GLEANINGS of complaints of beekeepers about bad crops on account of the temperature some nights going below 60 degrees, I wonder how these beekeepers would feel *here*, where the thermometer, even during our warmest summer months, seldom registers as high as 60 degrees at night; where night frosts kill the buckwheat bloom, and where the heather often does not secrete any nectar on ac-

count of the cold nights! And the long spells of rain we have but too often! rain for days on a stretch, washing all the nectar out of the flowers! One can fancy the state of mind of the beekeeper when the lindens around his apiary are in full bloom and his

bees have to remain at home on account of the pouring rain; when, morning after morning, his hope is frustrated on seeing the sun breaking thru the clouds! And such seasons are not the exception here.

Soest, Holland.

TWO VARIETIES OF THE EUCALYPTUS

Eucalyptus Mellidora (Yellow Box Gum)

BY LESLIE BURR

The name *Mellidora* is from the Latin, and means "honey scented." The common name is yellow box gum. The trunks of these trees are often crooked and gnarled. The branches have a spreading or sprawling habit. In Australia the tree is said to grow to a height of 250 feet, and obtain a diameter of from six to eight feet. The outer bark is of a brownish-gray color, and is persistent. The inner bark is yellow. It is because of this yellow inner bark that the tree is called "yellow box." The branches are smooth. The leaves on the young trees are apt to be oval; but when the tree obtains a few years' growth the leaves are lance-shaped. There is very little difference in

the sides of the leaves, both sides being of a dull-green color.

The botanical name, *E. mellidora*, was given this particular eucalyptus by reason of the fragrance of the blossoms.

As to its habits, its period of bloom is during the winter and early spring, the period of bloom continuing over several months. The tree will do well near the coast, on low mountains, in hot valleys, and will also resist considerable frost. It is one of the most profuse bloomers, and probably yields a greater amount of honey than any of the other varieties. The flowers grow in compact clusters. The seed-pods are about 1/4 inch in diameter, and are egg-shaped,



Leaves and blossoms of the yellow box gum, *Eucalyptus mellidora*.

with the small end of the egg cut away. The wood is very durable under ground, and is valuable for fence-posts. The tree makes a rapid growth, but is not as rapid a grower as the *E. globulus*, or blue gum; but the wood is more valuable.

EUCALYPTUS CORYNOCALYX, THE SUGAR GUM.

Taking all things into consideration, the *Eucalyptus corynocalyx*, commonly called the "sugar gum," will in the future probably be the most important to beekeepers of all the various species of eucalyptus. The tree in the matter of bark, leaves, and general appearance is similar in many respects to various other species; but it is in fact one of the easiest to identify. The average person who is at all familiar with eucalyptus should have no difficulty in identifying it.

The bark of the tree, after it has attained some size, is smooth, and continuously flakes off in patches. The main trunk is of a cream color, the patches where the bark has recently been shed being of a lighter color. The color of the bark of the very young twigs is reddish. The young leaves are nearly round or slightly oval, those of the mature tree being the usual lance shape, similar to those of the red or blue gum, the average length of the leaf being some five or

six inches. In the color of the leaves there is some variation in different trees. On some trees the foliage is quite light, generally, tho the leaves on the upper surface are a dark shiny green, the lower surface being dull and of a lighter green. There are a considerable number of these trees in Balboa Park, the 1400-acre city park of San Diego, Cal. The period of bloom lasts for several months, beginning about May 1. Some authorities state that the tree comes into bloom in the fall, but such is not the case in this locality, altho there is considerable bloom during the late summer and fall months.

The principal distinguishing feature of the sugar gum is the form of the buds and of the mature fruits, the unopened bud being club-shaped, from which it derives its name, "corynocalyx," meaning "club-shaped calyx." The cover which tips the end of the bud is the largest in diameter of a part of the bud and is very abruptly pointed, very much resembling the club which used to repose near the Giant Bugboo Bill in the story-books of our childhood days. The buds grow in clusters, there being usually from eight to twelve buds in a cluster. On some trees, however, there may be double the foregoing numbers. The fi

urn-shaped, and the opening of the end very small, the seed-valves being deeply closed. Quite often there are also longitudinal grooves on the outer surface.

In the matter of localities where it will grow, a few trees in southern California were injured by the heat on the well-remembered 17th day of September, 1913, when most of the thermometers in southern California were not long enough to register the temperature, and so broke in the attempt. The various authorities on the subject of eucalyptus, however, recommend it as being one of the species adapted to hot dry regions. The tree also seems to stand about as much frost as any of the eucalyptus family. In the matter of growth, it is generally conceded to be but little behind the blue gum; and in some few instances it has outgrown that tree. In the last year or two considerable numbers of this gum have been planted, altho in years prior such was not the case.

As to usefulness, it makes a fair shade-tree and has been planted to a considerable

extent as an avenue shade-tree. When planted comparatively close, as in the case of timber culture, the trunks are very straight with but little taper. Various authors on the subject of eucalyptus agree that the timber is more useful than that of the blue gum, for the reason that the trunk is straighter and the wood has the added quality that it will not rot when placed in contact with the earth, so is useful for fence-posts, railroad-ties, etc.

As a honey-producer, in the amount of nectar secretion it is one of the best. It has white blossoms, and is quite a profuse bloomer. The honey is amber. Taking everything into consideration, this species is not only one of the most valuable to beekeepers, but also thoroly deserves that reputation for general purposes, and should be one of the most widely planted of trees thruout the Southwest. Every beekeeper, wherever eucalyptus will grow, should boost the sugar gum, for the benefit of himself and his neighbors.

San Diego, Cal.

THE VICTORIAN APIARISTS' ANNUAL CONFERENCE

BY E. B. MACPHERSON

The meeting was held in Melbourne at the Flinders Building. There were present 150 farmers from Great Britain and Denmark; also members from distant states of the great commonwealth, all of whom took keen interest in the different papers which were read by live and practical beemen. A talk and good fellowship reigned supreme.

Mr. D. Morgan, the president, read a paper on shifting bees to better fields. He finds that, the darker the bees are kept,

the better they will travel, and also recommends good strong factory-made hives for migratory beekeeping. He uses loose frames, and says he can put a small nail in each end of the frames before shifting the bees, and says he can put them in and draw the nails out as fast as he can pack bees with Hoffman frames. Mr. Morgan has shifted his apiaries many times.

The members brought samples of their own honey. Which was the best? Well, you know every one thinks his own honey



The Victorian (Australia) annual convention.

is the best; but next year there is to be a prize of ten shillings (given by Mr. Pender, of New South Wales) for the best one-pound pot of honey. Mr. S. George Rich is giving a prize of ten shillings to the one who gets the most new members during the year for the Victorian Apiarists' Association. As is well known, some large honey-producers are not in this association. If all "honey-grubbers" would link up with us we might be a power to reckon with. The photographs are some that I took at the Botanical Gardens in Melbourne, where we spent a very pleasant day at the close of the convention.



Snapped in the Melbourne Botanical Gardens.

Mr. F. R. Beuhne gave us proof that he is a bee expert. He answered all questions from the question-box in short order. He also had some very interesting specimens of pressed-gum leaves and blossoms.

Port Fairy, Vic., Aus.

MY OUTYARDS EXIST IN MEMORY ONLY

BY L. K. SMITH

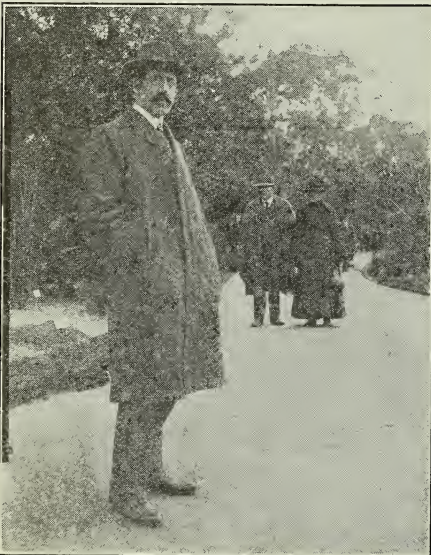
Imagine, if you can, a straight lagoon, one and one-half miles wide and seventy long, and you have an idea of the Indian River on the east coast of Florida. Now locate your home apiary; put a dozen colo-

nies across this river in a neighbor's yard; another dozen $2\frac{1}{2}$ miles south; another dozen 2 miles north, a dozen 3 miles further on, and another 7 miles, and then try to care for the 7 colonies of a friend, and you have my situation.

Now for the ways and means to care for this string of small apiaries. I had a sailboat, row-boat, wheelbarrow, extracting-tent, and a wife and daughter. Right here I must say that my wife was the bee-master, and chief conspirator, while I was master mechanic and sailing master, my daughter being an able assistant.

For some years we worked along this way; then it fell to my lot to do the work alone, and for a time I hammered at it faithfully. But at last came doubts of the advantages obtained by this out-apiary system, and today those out-apiaries are memories only—memories of the hives either over full of honey or full of moth—memories of postal cards received, which told of swarming, of finding covers partly off the hives, and finally of two colonies being stolen from one of these yards.

When I believed in swarm control I believed in the out-apiary, and was willing to do the work necessary. I had to load up my boats with extracting equipment, sail and pole to the landing nearest the outyard to be extracted, unload on the shore, wheel



Mr. Blackburn, of England, one of the speakers at the Victorian convention.

and carry the cans, tent, hive-bodies, tent-poles, and extractor, from 50 yards at one apiary to 250 at another. Then I would set up the outfit, get out the combs, extract the honey, and replace the empty combs. Sometimes a shower would mix up my plans a little, but more often it was the robbing. At times I would leave the extractor in the boat anchored some distance from shore, and bring the combs to the boat and extract without screens of any kind. This worked nicely until the robbers got a line on me, and then the shop had to close.

After a time I carried empty combs to these outyards, and brought home the full ones. This made heavier lifting to load and unload in getting the honey home, but it was much the best plan.

A motor finally took the place of the sail; and, while it had many points in its favor, it did not solve the problem, but served to convince me of the errors into which we had fallen years before regarding the out-apiary, the greatest of them all being in the enforced neglect of the bees at home while trying to care for those at an outyard.

To sum up, I will say that, when I start another outyard, I will take in a partner. Grant, Fla.

[There are thousands of beekeepers who are able to manage out-apiaries successfully. We believe our correspondent does not mean to denounce the out-apiary in general, but to point out some of the disadvantages when there is a lack of the proper facilities. Many a man having been successful with one apiary meets with failure when he attempts the out-apiaries, frequently because of his lack of suitable equipment.

Fundamentally, a convenient location must be sought that will profitably support a good number of colonies—not too far



A sail-boat is too slow a means for transportation from one outyard to another.

away from other apiaries, for travel costs both time and money. There is no question but that the automobile is solving the out-apiary problem in instances too numerous to mention.—Ed.]

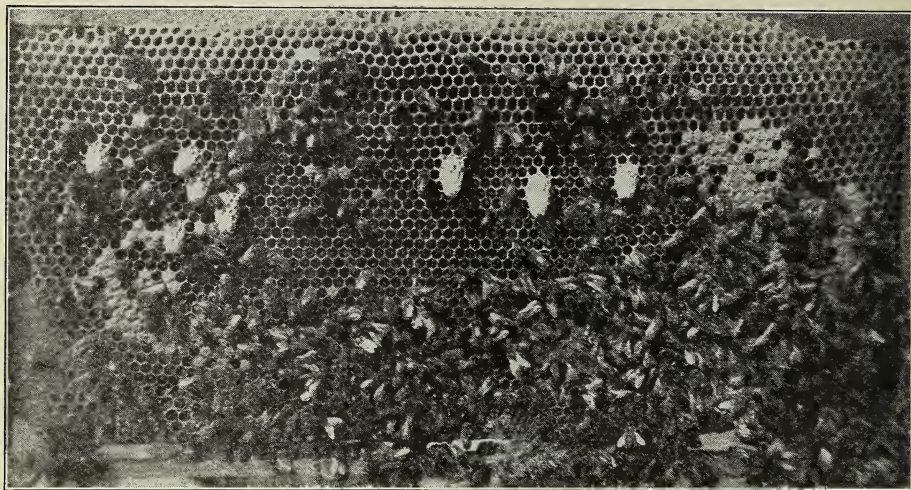
EARLY FEEDING ADVISABLE

BY W. C. MOLLETT

About every other autumn we usually have a light honey-flow or too much wet weather, so that it is necessary to feed more or less in order to carry the bees thru the winter. I usually feed during September or October unless I have no time to attend to it then, so that I may happen to be compelled to feed at different times thru the winter, as the weather will permit. I usually make the syrup about 2 to 1, or equal parts sugar and water, according to whether it is in the fall or winter, as it should be made thicker if the feeding is to be done late in the season.

I notice that it is very much better to feed early than late, as I have much better success when I feed in September than

when I put it off till later. At this time there is usually a light flow of nectar and plenty of pollen. This seems to make feeding more successful than later, as it does not excite the bees so much, and they can secure pollen, which seems to be very necessary for bees when fed sugar syrup. Last fall I did not get the bees fed up in time, and so was compelled to feed several times during the winter when the weather was warm enough. This did not give the bees time enough to get the syrup properly ripened or sealed, as the warm spells lasted only two or three days at a time. As a result either of this or of the weather they did not winter very well, and in spring were much weaker than usual. Further-



Comb of eggs and unsealed brood given to a queenless colony. Nine queen cells were built. One on the lower right-hand corner, not visible, hatched first. Photographed by R. L. Leland, Belding, Mich.

more, when fed at different times it seems as if bees consume much more than when the feeding is all done at once. I think that, if we are required to feed sugar, we should do all our feeding early, at the same time giving each colony enough to carry it thru the winter so that they can properly evaporate the dampness, and also get it mostly sealed before cold weather.

COLD-WEATHER UNITING.

Sometimes in the fall or early winter we find it is necessary to unite a few colonies that are too weak to go thru the winter. It is not a very difficult matter to unite bees late in the season; but in warm weather it is often impossible to unite them with any degree of success, especially if the honey-flow is over. A few times I have tried to unite two colonies into one and succeeded only in making two colonies into nothing, for, after the bees had fought and practically exterminated each other, the remaining bees were so weakened that they were worthless.

One autumn, as the result of a failure in the honey crop, I had several colonies that were too weak to winter successfully. I did not attempt to unite them till the weather became very cold—about January. Then, just as a severe cold snap was commencing, I went around and loosened the bottom-boards, so that the hives could be lifted without disturbing the bees when I was ready to unite them. The next morning I removed the covers as carefully as I could and lifted the colonies to be united on to the other colonies without making very much

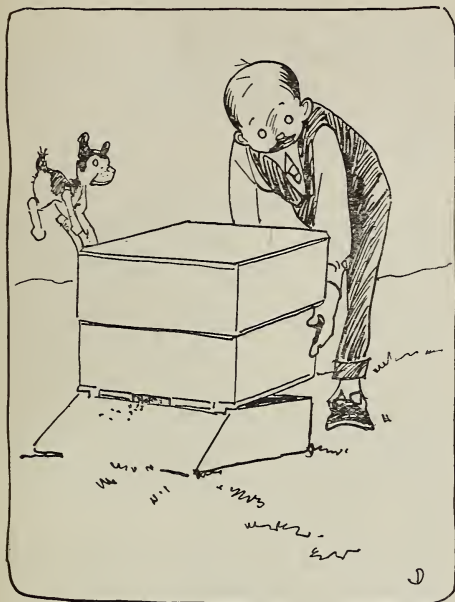
disturbance, and only a few bees flew out. As the weather was very cold the bees made no attempt to fight, and I did not place a newspaper between the two stories. By the time the weather warmed up a little they had become so much accustomed to the change that there was no trouble. Of course, in cold weather it is necessary to be as careful as possible, so that the bees do not fly out, as all the bees that escape will probably be lost, for, on account of the change of location, and the cold, the bees from the hive that is removed will be lost. Generally the bees will unite readily without any disturbance in cold weather, as they are so intent upon keeping up the heat of the colony that they do not take much notice of the change.

When two hives are placed together, the upper one is warmer than the lower, and the bees from the lower one will go up into the upper one and remain there most of the time till spring. In the spring one of the hives can be removed and used later for hiving a swarm.

It is better to unite colonies that have inferior queens or that lack vigor as honey-gatherers or that have any other defect, and thus get rid of undesirable stock. It would not be advisable to unite a colony having an inferior queen with one having a good queen, as it might happen that the bees would kill the better queen. This would not be so apt to happen if the one having the undesirable queen were weaker than the other one.

Stonececal, W. Va.

Heads of Grain From Different Fields



THE BACKLOT BUZZER.

BY J. H. DONAHEY

The bees that lay in their winter stores while the sun shines don't have to pay the butcher for his hand every time he weighs a soup-bone.

OCTOBER

BY GRACE ALLEN

When Autumn bows to Summer
(Who then steals quite away),
And spreads her gold and scarlet round
In such a royal way,
And chills the nights and mornings,
But sets the day afire
With gypsy flame and brilliant sun
And vagabond desire;

When smartweed takes the meadow,
And bitterweed's in bloom,
And aster opens on the hills—
Ah, then I leave my room,
And loiter in the beeyard
Where every hive's a-hum,
And vagrant thought, like flying bees,
Come and go and come.

Fall Feeding for Stimulation.

Fall feeding of bees is advisable especially in case of weak colonies. It pays to feed at any time after the honey-flow is over, for the reason that the queen will regulate her laying by the amount of stores coming in to the hive. This is especially true during the fall months when there is little honey to be gathered.

By feeding a little syrup every day or

several times a day one can keep the queen laying very late in the fall so there will be a large force of young bees with which to start in the winter.

This in turn means strong colonies in the spring. Many times colonies that appear to be very strong in the fall dwindle down during the winter so that they come out very weak in the spring. This is due to too many old bees in the hive, caused by the queen failing to continue her work late in the season.

The syrup that is stored with the late honey that is gathered improves the quality of the winter food, and this is excellent for brood-rearing in early spring.

It does not matter if the hive is full of honey; the queen will stop laying at any time in the fall when there is nothing coming in, whether it be early or late; but by feeding a very little at a time, and often, they will continue as long as the weather will permit the hatching of brood.

The hive should be kept as close and warm as possible; in fact, double-walled hives should be used, and packed as warm as for winter. Heat is more essential in September, October, and November than in December and January.

Bees will stand almost any kind of treatment except in early spring and late fall. These are the more vital periods at the time when young bees are most valuable.

Hartford, Ct.

Geo. T. Whitten.

[When feeding for stimulation it is always best to err on the safe side, and proceed with the idea of eliminating every possible chance for robbing. We advise giving half a pint of syrup very late in the afternoon only, so that by morning the excitement caused by the feed will have subsided. If the syrup were given several times a day, especially to weak colonies, robbing might be started. The latter part of October is usually too late for stimulative feeding except in the south-central and southern locations.—Ed.]

Another Successful User of the Honey Method of Introducing.

Since receiving the Sept. 15th issue of Gleanings I have been searching my files of bee literature of all sorts for items relating to queen-introducing. As I have not completed my research I am not ready to give specifically any data, but I wish to say the practice of sprinkling the bees and daubing the queen for introducing is decidedly not new as a whole nor in detail.

Just why I or any other beekeeper who has known of it right along has not given it thought or trial until now is a puzzle to me.

I used the method last season (1915) with perfect satisfaction and no failure, and this season more with the same success. Furthermore, I talked the "sousing" method, as I

like to describe it, before our summer meetings at Mount Holly and Elizabeth, and I have within the week received the word from the largest beekeeper in the state (about 400 colonies), "I have tried the 'souse' method—success every time."

My way of doing it is to use dilute honey, a good teaspoonful to a teacupful of water, which I souse over and between the frames from a flour or powdered-sugar dredger, and distribute it well. Use more or less according to the strength of the colony; anyhow, don't be stingy with the souse; give the queen a souse (so she looks like a wet hen), and run her down between the wettest frames.

This dilute honey is less likely to result in injury to the queen; is more quickly cleaned up, and less likely to start robbing; takes far less honey, and can be handled more rapidly; if any of it gets on the hands or clothes there is less of a mess, and it answers every purpose.

I will not take space now to discuss the ethics of this method; but I must say it looks like the simplest, least injurious, most nearly natural, quickest, and most logical method which can be devised. I will venture the prediction that, by the end of five years, everybody will be using the "sousing method," thereby saving hundreds of dollars and oceans of time.

Hoboken, N. J.

C. D. Cheney.

Fooled 'Em, Sure.

One day in August I was surprised to find a case of genuine robbing in full swing. The weather being very warm, and white clover still plentiful, and the bees gathering nectar from it, I little dreamed of any robbing likely to occur, so had left all entrances wide open—a circumstance that gave the robbers their opportunity.

I at once smoked away the bees and closed the entrance, then narrowed down the entrances to the near-by hives to about an inch opening. Having a supply of half-cured hay near by, I brought a few forkfuls near the hive. After about half an hour I again smoked away the cloud of robbers seeking to enter, and opened up the hive to a very torrent of well-filled robbers. The most of the thieves having made their exit I hastily closed the entrance again, leaving an opening sufficient for only one bee to pass at a time, and quickly covered the hive and accumulating bees deeply with the hay at hand. Near nightfall I cleared away the hay and opened the hive, allowing the marauders to go home. After dark I removed the hives to a dark corner in a cool cellar and covered it up, but with the entrance open.

I immediately put a dummy hive in its place on the stand, but with empty combs and a feeder in the bottom in which I put about a quart of very thin sugar syrup. The next morning I was pleased to see the robbers returning to the feast and crowding the narrow entrance of the dummy. They

were kept busy several hours before the syrup supply was exhausted, when, finding no more sweets around, they very quietly took their departure, thinking, no doubt, that they had effected a complete job.

Two days later I took the bees from the cellar and replaced them on the stand, where they were not again molested, and are doing as well as ever, apparently not any the worse for their experience.

Manawa, Wis.

E. E. Colien.

A Connecticut Report.

This is not a good location for the beekeeper, not being a natural clover location, and little interest is taken in trying to raise it. However, there has never been a time in the last twenty years when bees have had to be fed to keep them alive from May to October. On the other hand, there has not been a heavy honey-flow in the same period. From May till early July honey comes in a slow flow which booms brood-rearing and swarming; but with no heavy flow to check brood-rearing the problem becomes a big one if a surplus is to be secured. I had several queens laying in the outside combs of ten-frame hives May 5, 1914.

In trying to avoid increase and get the much-desired surplus I built a few ten-frame Jumbo hives, chaff packed them as the regular chaff hive, but the big hive sent out a swarm as early as any. A modification of the Aspinwall hive was tried, with slatted dummies and ten frames in two stories. This gave the same result as the Jumbo. Cutting queen-cells has been practiced, but I am not delighted to see a big swarm pile out of a colony which had the cells cut only a day or two previous.

I find that good queens can be reared here up to July 15 without feeding or trouble from robbers, but after that it is not very pleasant. I have forty colonies, which is enough for this location. My highest average yield of comb honey per colony has not exceeded fifteen pounds. The fall flow is very light, usually not being sufficient for wintering.

Delos O. Hart.

Barkhamsted, Ct., Feb. 29.

Smoker Chips.

Dry locust bark makes the best of smoker fuel.

If you do not want your smoker to go out while you are at lunch, fill it, get it going, then place it in a box twice the height of the smoker and leave the top of the box open.

A 60d spike nail and a tin tobacco-box for matches will be found convenient where you fill and light your smoker.

A piece of old enamel cloth stuffed in the top of your smoker will prevent its burning the fuel too fast, and will increase the volume of your smoke.

High noon on a hot day is the best time to examine a cross colony of bees.

Morgan, Ky.

J. E. Jordan.

Pollen Stored above an Excluder.

My bees persist in putting pollen in the shallow extracting-frames, not in solid patches, but in scattering cells enough to spoil the appearance. The hives are ten-frame, with queen-excluder under the supers. What is the cause and cure?

Mt. Vernon, Ill.

T. E. Brown.

Dr. Miller replies:

It is unusual for pollen to be stored above an excluder unless it be that the brood-combs are shallower than those in Langstroth frames, said frames being $9\frac{1}{8}$ inches deep. In any case I don't know of any remedy unless it be to have deeper frames below. There is just a possibility that you have a strain of bees unusually given to storing pollen in the surplus apartment, in which case introducing a queen of different stock would be indicated.

I don't see any great harm, however, in having pollen in extracting-combs. You speak of its spoiling the appearance; but those who buy extracted honey never see the combs from which it is extracted, and so care nothing for their appearance.

Do Bees Work the Second Crop of Red Clover?

In this locality I have never seen a honey-bee on the second crop of red clover; but I have never failed to see them on the first crop. The reason is this: The second crop yields nothing but pollen. In this locality the first crop is loaded with nectar; and since I have had Italian bees, the first crop has more seed than the second. This would be a good location for bees if the second crop of red clover would yield nectar, as the second crop is much shorter, and the bees could reach the nectar much easier. Again, the second crop blooms at a time when the bees have little to do.

Velpen, Ind.

W. T. Davidson.

[The reports from most localities indicate more bees on the second crop.—Ed.]

Bill-board Advertising Sold the Crop at Home.

About the time I began to take off my honey I went down town and bought some boards and painted them white. I had a man letter an advertisement on three large bill-boards that I made with my white lumber.

In the meantime I had told quite a good many that I had some nice honey, both comb and extracted, the price to be 15 cts. for the comb and 10 for the extracted in 10-lb. tin pails. I took a little to one of the editors of our village papers and he gave me quite a nice send-off about my honey.

The result was, the first thing I knew my extracted was all sold, and nearly all the comb honey. My crop was 2800 lbs. of extracted and 800 of comb honey. I could have sold as much more extracted if I had had it. Nearly all the honey was sold right

at the house. I had to deliver only a very little of it.

Aitkin, Minn.

Wm. Craig.

75 Per Cent Purely Mated.

I have bought quite a lot of untested queens from various breeders thruout the United States, and also in Italy. I had a few lots some years ago that ran pretty dark, nearly or quite fifty per cent, and the most that I have bought would run from 75 to 100 per cent pure so far as mating was concerned.

I have occasionally had a few old queens tucked in with dozen lots, and once, some years ago, I received a virgin when I sent for and paid for a warranted queen. This was from one of the good breeders too.

Union Center, Wis.

Elias Fox.

Carbolic Acid for the Colony that Does the Robbing.

The first of August I passed near my apiary one morning and noticed the bees were very cross. I went out to see what was the trouble, and they were robbing from several colonies. I soon found the colony which was doing the robbing, and I was at a loss what to do, but happened to think of my bottle of carbolic acid. I got that and smeared the entrance of the colony which was doing the robbing. In about two hours I used the carbolic acid again, and by mid day everything was quiet as usual, and has been ever since.

Stockton, Va.

Francis W. Gravely.

Bees that Worked for Nothing and More than Paid for Themselves.

I put a swarm in a home-made hive upstairs in my winter home, Auburndale, Fla., on Feb. 25, last year, and by April 1 the surplus part at the top of the hive, containing 56 1-lb. sections, was completely filled with the finest honey. In February of this year I raised the lid to see what was there, and, to my surprise, it was again completely filled with palmetto honey, making 112 lbs. in less than one year. What do you think of that?

Auburndale, Fla.

I. G. Tolerton.

B's

A little girl who is but six years of age was asked to make a sentence, each word of which began with B. The outcome of it was this:

Big bees buzz.
Bright bees bite.
Beautiful bees bring bank bills.
Big bees bring bother.
Bumble bees bother bears.
Both bother boys.
Bees bear bee bread.
Bee bread brings bees.

Ethel M. Comyn Chesig.

Okanagan Center, B. C.

GLEANINGS FROM QUESTIONINGS

F. A. C., Nevada.—What causes brood to be wrong end up in cells?

A. We cannot explain to you why pupæ sometimes get in a cell wrong side up. We can only surmise that nature has made a mistake in some way. Of course the young bee dies, because it cannot get out.

F. P. H., Los Angeles, Cal.—In rearing queens how many mated queens can one get per month from each mating hive or nucleus? What per cent of virgins are lost in mating?

A. We get an average of two laying queens per month from each nucleus. Eighty per cent successful mating for the season is a good average.

W. E. K., Missouri.—Would it be all right to put net weight of sections on top of cartons instead of on the sections.

A. Yes, it is entirely permissible; in fact, it is the only thing to do when sections are put in cartons. The actual net weight of the honey inside of the section must go somewhere on the outside of the package. Where the sections are not put in cartons, then of course the net weight must show on the section itself.

J. A. C., Wisconsin.—My queens stopped laying in August. What was the trouble?

A. A queen when one or two years old will often and generally let up on egg-laying thru August and into September, and will not begin again to any extent until the fall flow, or when colonies are given stimulative feeding. On the other hand, queens three weeks or three months old will lay right thru the season, and their colonies must be supplied with stores to take care of the brood to prevent winter starvation.

E. J. E., Transfer, Pa.—Should supers be left on the hive during the winter in order to provide winter stores?

A. Ordinarily a super should not be left on the hive during the winter. There are some exceptions to this rule, as for instance in the case of exceptionally strong colonies, or colonies that are short of stores when it is too late to feed. In such case a super may be left on containing honey. The better plan, however, is to make sure that there is plenty of honey in the brood-combs so that the super would not be needed unless for holding packing material.

M. C. W., Bethel, Ct.—How can I disinfect a honey-extractor which has been used to extract honey from combs that contained foul brood?

A. If you have access to steam it would be a good plan to fill your extractor can with water and then introduce steam until the water boils. Let it boil for a few minutes and then it will be perfectly safe to use. If you have no steam you will have to rely

on using a large quantity of boiling water, heating several wash-boilers of water at a time, so that the can will be filled with scalding water.

F. A. C., Golconda, Nev.—I wish to winter my bees on candy. What is the best recipe for making it?

A. We do not advise feeding candy except when the discovery that the bees are short of stores is made too late for feeding sugar syrup. We regard candy as a substitute to be relied upon in case syrup feeding is impossible, as in cold weather, for instance. If there is a chance to feed syrup, do so by all means, rather than to rely upon candy.

It is not too late to feed syrup. We recommend a syrup made by mixing two parts of sugar to one of water and feed until each colony has at least twenty-five pounds of sealed stores—stronger colonies thirty to thirty-five. The candy is an unnatural winter food, but it can be relied upon in emergencies.

C. G. M., Ohio.—I am a beginner with five colonies. Will you tell me how to winter them?

A. Assuming that the bees are in single-walled hives your first undertaking will be to make sure that each colony has enough stores. An average-sized colony in a ten-frame hive ought to have not less than twenty-five pounds of sealed stores, and thirty is safer. If there is not enough in the combs to make up about this weight, feed thick sugar syrup not later than October 20, made by mixing two parts of sugar and one of water.

The next important requisite is a sheltered location. A spot sheltered by buildings, trees, or artificial windbreaks should always be selected. Such a place is better in summer as well as in winter.

In your locality additional protection is necessary if you winter out of doors. Contract the entrances down to a space of $\frac{1}{4}$ by 3 to 5 inches, and be sure that each hive is well protected. If you like you can place empty boxes over each hive and fill in all around with leaves or shavings, or other good packing material, covering up everything on top with a cover that will not leak. Of course the entrance must be left open all the time. If you prefer you can pack the five hives in a row, or place three in one group and two in another.

If you have a cellar where the temperature does not vary much below 40 nor above 50, where the ventilation is good, you could winter in the cellar without any packing. Less stores would be consumed also, altho you would have the labor of carrying them in and setting them out again. Ideal beecellars are rather hard to find. Too much dampness or cold air makes trouble every time.

A. I. Root

OUR HOMES

Editor

Except a man be born again he cannot see the kingdom of God.—JOHN 3:3.

He which converteth the sinner from the error of his way shall save a soul from death, and shall hide a multitude of sins.—JAMES 5:20.

During our pastor's recent vacation there was one Sunday when there were no services in our Congregational church; but he enjoined us, each and every one, to take the opportunity to attend the neighboring churches. Said he, "Do not any of you stay at home just because there are no services in our own church." I accordingly went to the Baptist church. On this occasion the leader of the Bible class had occasion to remark that the Jews were Jews by birth. They prided themselves on the fact of their being sons of Abraham, and seemed to claim there was no other way of belonging to God's elect than by birth. Well, our leader suggested right here that the new birth that is open to each and every child of humanity opens the way to every sinner, no matter what his past life may have been.

If I am correct about it, there has been a great deal of difficulty in comprehending or explaining this matter of the new birth. Even Nicodemus, a "master of Israel," expressed a difficulty in comprehending it away back in oriental times.

Well, my purpose in this Home paper is to try to make it plain to you what this new birth means, and how it is brought about. The story I am going to quote comes from Frances E. Willard. And, by way of introduction to you as to who Miss Willard was, I clip the following from the *Appeal to Reason*:

Frances E. Willard was recognized as one of the greatest women this country has produced. Her entire lifetime was spent in the advocacy of reforms, particularly temperance. The state of New York has honored her memory by putting a statue of her in Statuary Hall at the United States capitol in Washington. Miss Willard's statue is the first one of a woman found in that famous hall.

Now, friends, here is the tract that I have read over and over, and I hope it may appeal to you as it has done to me every time I have read it:

WHITE SHOES AND WHITE DRESS.

Miss Willard always enjoyed telling this true experience of one of the leaders of the Temperance Crusade:

One morning during the crusade a drunkard's wife came to my door. She carried in her arms a baby six weeks old. Her pale, pinched face was sad to see, and she told me this sorrowful story: "My husband is drinking himself to death; he is lost to all human feeling; our rent is unpaid, and we are liable to be put out into the street; and there is no food in the house for me and the children. He has a good trade, but his earnings all go into the saloon on the corner near us; he is becom-

ing more and more brutal and abusive. We seem to be on the verge of ruin. How can I, feeble as I am, with a babe in my arms, earn bread for myself and children?"

Quick as thought the question came to me, and I asked it: "Why not have that husband of yours converted?"

But she answered hopelessly, "Oh! there's no hope of such a thing. He cares for nothing but strong drink."

"Ill come and see him this afternoon," said I.

"He'll insult you," she replied.

"No matter," said I. "My Savior was insulted, and the servant is not above his Lord."

That very afternoon I called at the little tenement house. The husband was at work at his trade in a back room, and his little girl was sent to tell him that a lady wished to see him. The child, however, soon returned with the message, "My father says he won't see any one."

But I sent him a message proving that I was indeed in earnest. I said, "Go back and tell your father that a lady wishes to see him on very important business, and she must see him, even if she has to stay till after supper."

I knew very well that there was nothing in the house to eat. A moment afterward a poor, bloated, besotted wreck of a man stood before me.

"What do you want?" he demanded, as he came shuffling into the room.

"Please be seated, and look at this paper," I answered, pointing to a vacant chair at the end of the table where I was sitting and handing a printed pledge to him.

He read it slowly, and then, throwing it down upon the table, broke out violently:

"Do you think I'm a fool? I drink when I please, and let it alone when I please. I'm not going to sign away my personal liberty."

"Do you think you can stop drinking?"

"Yes, I could if I wanted to."

"On the contrary, I think you're a slave to the rum-shop down on the corner."

"No, I ain't any such thing."

"I think, too, that you love the saloon-keeper's daughter better than you do your own little girl."

"No, I don't, either."

"Well, let us see about that. When I passed the saloon-keeper's house, I saw his little girl coming down the steps, and she had on white shoes, and a white dress, and a blue sash. Your money helped to buy them. I come here, and your little girl, more beautiful than she, has on a faded, ragged dress, and her feet are bare."

"That's so, madam."

"And you love the saloon-keeper's wife better than you love your own wife."

"Never, no, never!"

"When I passed the saloon-keeper's house I saw his wife come out with a little girl, and she was dressed in silk and laces, and a carriage waited for her. Your money helped to buy all the silks and laces, and the horses and the carriage. I come here and find your wife in a faded calico gown, doing her own work; if she goes anywhere she must walk."

"You speak the truth, madam."

"You love the saloon-keeper better than you love yourself. You say you can keep from drinking if you choose; but you helped the saloon-keeper to build himself a fine brick house, and you live in this poor tumble-down old house yourself."

"I never saw it in that light before." Then, holding out his hand, that shook like an aspen leaf, he continued, "You speak the truth, madam—I am a slave. Do you see that hand? I've got a piece

of work to finish, and I must have a mug of beer to steady my nerves, or I cannot do it; but tomorrow, if you'll call, I'll sign the pledge."

"That's a temptation of the devil. I do not ask you to sign the pledge; you are a slave, and can't help it; but I do want to tell you this. There is one who can break your chains and set you free."

"I want to be free."

"Well, Christ can set you free, if you'll submit to him, and let him break the chains of sin and appetite that bind you."

"It's been many a long year since I prayed."

"No matter; the sooner you begin, the better for you." He threw himself at once upon his knees, and while I prayed I heard him sobbing out the cry of his soul to God. His wife knelt beside me, and followed me in earnest prayer. The words were simple and broken with sobs, but somehow they went straight up from her heart to God, and the poor man began to cry in earnest for mercy.

"O God! break these chains that are burning into my soul! Pity me, and pity my wife and children, and break the chains that are dragging me down to hell! O God! Be merciful to me a sinner." And thus out of the depths he cried to God, and he heard him and had compassion upon him, and broke every chain and lifted every burden, and he arose a free, redeemed man.

When he arose from his knees, he said: "Now I will sign the pledge, and keep it."

And he did. A family altar was established. The comforts of life were soon secured—for he had a good trade—and two weeks after this scene his little girl came into my husband's Sunday-school with white shoes, white dress, and blue sash on, as a token that her father's money no longer went into the saloon-keeper's till.

But what struck me most of all was, that it took less than two hours of my time thus to be an ambassador for Christ in declaring the terms of heaven's great treaty whereby a soul was saved from death, a multitude of sins were covered, and a home restored to purity and peace.

The above tracts are furnished at five cents per

dozen; 30 cents per 100, postpaid. M. E. MUNSON, publisher, 77 Bible House, New York.

Some of you may urge that the above is only fiction; but the first paragraph tells us that it is a true experience; and it is very much such an experience as I have had again and again, as you may recognize if you recall what I have written in these Home papers. This intemperate man was a sample of those that the world considers beyond help. It required quite a little faith on the part of the good Christian worker to insist on seeing him when he refused to be seen. Then it required a considerable amount of tact as well as faith to *get hold* of such a man. The white shoes and the white dress belonging to the saloon-keeper's daughter touched the vulnerable spot in the heart of the poor besotted inebriate. Then the suggestion in regard to the saloon-keeper's *wife* drove another nail, until the poor slave of drink got to the point where he could say, "O God! have mercy on me, a sinner."

Now for the moral of this tract, and may God grant that it may be scattered far and wide. There are such poor helpless slaves of drink in almost every community; and you too, my friend, whether man or woman, can do just such work if you will. Get down on your knees first, and ask God to give you faith and courage, and then turn in and help in this glorious work of "rescuing the perishing."

TEMPERANCE

Visiting the iniquity of the fathers upon the children unto the third and fourth generation.—Ex. 20:5.

Ever since infantile paralysis commenced its terrible work I have been impressed with the idea that sooner or later we shall find the trouble comes, perhaps indirectly, from the use of intoxicants; and I have feared, too, that some of our great cities might be reluctant to admit or have it come out in print that our open saloons are more or less responsible for this terrible malady. It has already been remarked that it is confined mostly to our great cities, and to those portions of these cities where there is a congestion of population and a lack of sanitary measures; and I wish somebody could tell me whether its ravages are not confined mostly to our wet cities. Has infantile paralysis started or made any headway in our dry cities and towns? We have had just one case here in Medina County, and it occurred right close by the only spot where

there are two saloons put in by the famous (or infamous) home rule a year ago. Below is a clipping from the *Cleveland Leader*, which, while it does not hit exactly where I expected, contains a suggestion that may well be pondered. The Bible tells us that when Pharaoh said, "Who is the Lord that I should obey him?" when nothing else would subdue that proud monarch the Almighty struck a blow at the first-born in all the land; and is it not possible that the loving Father has seen fit to strike a blow at the babies when nothing else would rouse up and bring to their senses the fathers and mothers? Now read the clipping and look out all around you, as far as you are able, and see if nicotine is not at the bottom of the whole matter.

"TOBACCO PLAGUE CAUSE;" INFANTILE DISEASE IS FORM OF NICOTINE POISONING, CLAIM.

NEW YORK, Sept. 29.—If you are a smoker you probably have heard of Dr. Pease, president of the Non-smokers' League, and arch enemy of the cigarette. Well, then, Dr. Pease and his favorite

author, Miss Annette Hazelton, have a little news for you.

Infantile paralysis, says Dr. Pease, is simply a form of tobacco poisoning. Infants in arms become infected thru their tobacco-using parents, he has informed the health department.

Our poultry friends will remember that, a short time ago, a sort of paralysis started among the poultry; and when the searchlight of science was turned on the matter they declared the whole trouble was because the chickens had gotten hold of some dead carcass; and poultrymen everywhere are exhorted to see that everything of this sort is either burned up or buried so deep that no enterprising scratchers can ever resurrect it. Is it possible we have fathers and mothers in this land of ours who would keep on using tobacco when it might kill or cripple for life the baby in the cradle, or, worse still, the *unborn* babies?

"THOU CHILD OF THE DEVIL."

The above expression that I used in these pages recently it seems has called forth the following from friend Doolittle. Read it very carefully and see if you don't think he is about right:

THE DEVIL DRESSED IN WHITE.

Bro. Root:—I note what you have to say in the Temperance department of GLEANINGS for September 1, p. 817, under the quotation of scripture, "Thou child of the devil; thou enemy of all righteousness; wilt thou not cease to pervert the right ways of the Lord?" You think that Paul, if he were alive upon the earth now, would say this of the liquor people and their business, even tho it sounds a little rough. And in this I agree with you exactly, and I have so said many times in print and otherwise. But allow me to ask, "Who are the liquor people?" Sixty years ago, when I was a boy, the man who made a business of selling liquor was called a "black devil," and was so considered, as is the liquor traffic of today by many of the people of the United States; but in 1862 the government at Washington took this devil in as partner, clothed him up in white, and gave him next to the highest place in the affairs of the nation. By that act Congress never gave such a gift to anybody else—not even in its land grants to the railroads—as it gave to the liquor interests, when, in 1862, it passed the internal-revenue bill. The modern liquor-traffic is the product of that bill. It created organization, it established monopoly, it gave an air of respectability to what had before been disreputable in the eyes of all decent people. It enabled the liquor maker and seller to shake his dirty fist in the face of the American government and say: "You cannot do without me!" and, while robbing the American people of billions of dollars annually, to trample on their necks with the insulting assertion, "I pay your public expenses;" and, strange to say, this devil is still wearing his white apparel, because 498 sovereign citizens of these United States, out of every 500, say at every national election, "We love to have it so," by casting their ballots with political parties who are pledged to the continuance of this very same state of affairs. Every thinking man knows that the party in power at Washington is the government; and every voting citizen of these United States should know that, when he gives his ballot for the election of *pro-license* parties, he is voting for the

continuance of this "devilish" state of affairs for another four years, to the very utmost borders of our fair land. The man who wants the liquor traffic, this "child of the devil" (according to the apostle Paul, A. I. Root, and Doolittle), to go right on destroying "50,000,000 children and young people under 25 years of age" (as given on page 817 of GLEANINGS), the value of each of which is "\$8000," or "\$400,000,000,000" for the whole, can vote the Republican ticket or the Democratic ticket or the Socialist ticket; whichever of these he votes, his ballot will say to the gin-miller, the brewer, the distiller, the saloon-keeper, "Go right on destroying the boys and girls of the nation." But the citizen who wants to make his vote say that he wants the liquor-traffic to stop robbing the people, to stop disturbing our nation's life, to stop killing men and women and children, will have to vote the Prohibition ticket to have his ballot say that. It is useless to attempt to stop the sale until we stop the manufacture. And before we can do that, we have got to *break the partnership* of the national government at Washington with the traffic. And before we can do that we have got to have a party that isn't taking the lion's share of the profits and taxing and licensing it. We have got to go to Washington and adopt "one standard of morals" on the liquor question, the same as we did on the slavery question and the Louisiana lottery question.

Borodino, N. Y., Sept. 6. G. M. DOOLITTLE.

I think I can give a hearty amen to the above unless it is where it includes the Socialist ticket with the Republican and Democratic tickets. Quite a few Socialists have written me lately to the effect that socialism was "out and out" for prohibition. I have not seen the Socialist platform: but if that platform gives any more encouragement than does the Democratic and Republican, I have not been informed.

RAISING REVENUE FOR OUR GREAT CITIES BY TAXING THE SALOON-KEEPERS.

There is much discussion going on just now as to how it came about, and where the trouble is, that so many of our great cities are not only short of funds but are threatened with bankruptcy. There have been all sorts of discussion in regard to the cause; but yet few periodicals, unless we except temperance papers, come right out and admit that liquor revenue costs in the end *ever so much more* than it comes to. Below is a clipping from the *New Republic*:

OHIO'S BIG BOOZE BILL

COLUMBUS, Sept. 23.—At the present time there are 6000 saloons in Ohio, each of which pays yearly license fees of \$1000. In spite of this enormous income from wet sources, the city of Akron is bankrupt, while Toledo, Columbus, Cleveland, Cincinnati, and other large wet cities, are in serious financial straits and are practicing rigid economy. The saloon revenue is insufficient to pay the saloon cost. It is estimated that the enormous sum of \$110,000,000 is wasted annually in Ohio alone for liquor.

Of course, the above is from a temperance periodical; but here is another one, clipped from the *Youngstown Telegram*, that does

not pose, so far as I can learn, as a temperance publication:

LIQUOR AND TAXES.

While the local Chamber of Commerce is discussing the sad financial condition of the larger Ohio municipalities, and recommending concerted action toward obtaining relief, it might inquire into the ancient claim that it is the revenue from the liquor-traffic that keeps cities solvent. It would be an interesting inquiry just now when 6200 licenses are to be distributed in Ohio among 7000 applicants.

If the saloon makes lower tax rates, and breeds prosperity, then Cleveland, Youngstown, Akron, and Toledo should have comfortable municipal bank balances, for their license quotas are filled up. Columbus, Cincinnati, and Canton should be almost as prosperous, for their saloons approach in number the limit allowed by law. Instead they are harassed with debts. Topeka, Des Moines, Denver, Portland, Seattle, Spokane, Birmingham, Atlanta, Memphis, Nashville, Wheeling, Charleston, Richmond, and Oklahoma City are not crying bankruptcy. Yet they derive no revenue from the liquor-traffic. They range in population from 50,000 to 300,000, and they have not the wealth of Ohio cities.

In view of the above, is it not about time that our city fathers should begin to "sit up and take notice"?

THE LARGEST DRY CITY IN THE WORLD.

The clipping below comes from the *New Republic*:

TORONTO, LARGEST DRY CITY; CANADIAN CITY WITH FOUR HUNDRED THOUSAND BECOMES WORLD'S LARGEST DRY CITY.

TORONTO, Sept. 16.—Today this city enters the dry column under the provincial act, and becomes the largest dry city in the world. This act, which puts the entire province of Ontario dry, cannot be contested for at least three years.

The provincial legislature in passing the act first voted absolute prohibition, and then asked the people of the province to ratify the vote. This popular vote will not be taken until after the war, however.

I am not sure the above is correct in saying that Toronto is the largest dry city in the world; but if it is *not* true we shall be "gladder yet." Below is something further, from the *American Issue*. Is it not worth a careful and *prayerful* consideration?

HOW IS THIS FOR A RECORD?

The city of Toronto, Canada, together with the entire province of Ontario, became dry Saturday, September 16. On the last day saloons were open, there was the usual drunken orgy attending the final closing of the liquor-joints. The following Monday morning there were 142 drunks in police court. Tuesday morning there were six such cases, and on Wednesday there was not a drunk before the court. That is some record for a city of more than 400,000 population, the largest prohibition city in America.

WHY CALIFORNIA FAILED A YEAR AGO.

There were at the last election for governor 250,000 voters who did not vote on the question of wet or dry, and 80,000 who *never voted at all*—a total of 330,000 voters that never voted yes or no, and you can rest assured the *wets* were *all out*. We were beaten 160,000. We are organizing to see that every one votes, so you see there are 330,000 votes to be counted one way or another.

There are only 2100 saloons in San Francisco Co. I have been in business for several years in serving the public, and I can vouch for all of the above. May the good Lord bless you in the good work you are doing.

Modesto, Cal.

F. F. TURNER.

Are there not other states, where *thousands*, "never voted at all?"

FLORIDA AND ITS PRESENT PROGRESS.

I have been for some time hungering and thirsting for some good news from Florida. The following is clipped from the *New Republic*:

FLORIDA'S LEGISLATURE IS DRY.

Last year the submission of the prohibition amendment was defeated in the legislature of Florida by one vote. Now Mr. Pendleton, Superintendent of the Florida Anti-saloon League, announces that 24 of the 32 members of the State Senate and 60 of the 75 members of the House have pledged themselves to vote for a resolution submitting the question of a state-wide prohibition amendment to the voters in the 1916 general election.

PROHIBITION SENTIMENT GROWS IN FLORIDA.

By a vote of 3 to 1 the important county of Broward has voted for prohibition.—*American Issue*.

"STRAWS SHOW WHICH WAY THE WIND BLOWS."

We clip the following from the *Weekly Bulletin* of the Methodist Temperance Board. Have they not got it about right?

THE AIR IS FULL OF STRAWS, AND THEY ARE ALL THE SAME COLOR.

The rousing verdict of the voters of Maine in favor of the prohibition law, the sweeping victories of the "drys" in the primaries of Montana, South Carolina, and other states, simply marked a continuing tendency which has been evident for several years.

In Kansas all political parties in convention this year declared for prohibition. In Iowa the Republican and Democratic parties boarded the water-wagon. In Colorado the Republican and Democratic parties endorsed the present dry law and declared against allowing brewers to make beer and sell it in unbroken packages. In West Virginia both Republicans and Democrats in convention put an O. K. on state-wide prohibition and declared for strict enforcement of it. In New Mexico, a wet state, the Republican party in state convention declared in favor of submitting a prohibition law to a vote of the people thru the legislature, and it is practically certain that the Democratic party will take similar action. The Republican convention of Utah nominated a dry candidate for Governor, defeating Governor Spry, who vetoed the prohibition act passed by the last legislature. The state administrations of Washington and Oregon are in favor of prohibition and a strict enforcement of it.

Here is something else from the same sheet:

WHISKY NOT EVEN GOOD FOR SNAKEBITE.

Dr. Evans, the medical editor of the *Chicago Tribune*, recently discussed the question of snake-bite.

"Should whisky be given?" he asks, and answers "No. All authorities agree on that."

Dr. Evans quotes McFarland, an authority, as follows:

"The usual recommendation is to load up with whisky. In reality nothing could be worse. The use of whisky for snakebite does much harm."

Just think of it, friends. For ages past the man who was near death because of a snakebite has been deluged with whisky. If he died, they declared he was so far gone that even *whisky* would not save him. If he recovered, in like manner they would declare he would have died sure had it not been for the booze; whereas the real truth is, the whisky did harm and *hindered* recovery, *always* and *every time*.

Here is another straw, which I copy from Mr. Bryan's *Commoner*:

Straws, they say, show the direction of the wind. The fact that the railroads are taking liquor off the diners is a good-sized straw. The sentiment against alcohol is growing.

DRINKING WHISKY TO ENABLE ONE TO STAND SEVERE COLD.

It seems almost impossible to get many people over the notion that whisky is good for snakebites, good for enduring severe cold, etc. Our good friend F. E. Porster, of Morrill, Kansas, sends us the following, by Dr. Charles Lerrigo, and which appears in the *Farmers' Mail and Breeze*.

"Many people are quite sure that when the weather is biting cold they really need some one of these alcoholic drinks to keep them warm.

"A company of strong men thought so when they were traveling across the western plains several years ago. There were 20 of these men. It was winter, and they had to spend a terribly cold night in their camp without any fire. They had food enough and plenty of whisky; but one of the men knew more than the others; and, while they were talking about what they should do to keep warm, he said that for one thing it was not safe for any of them to drink whisky that night. He even went so far as to say that they were far more likely to freeze if they drank it.

"Two of his friends believed him, and the three took no whisky before going to sleep; they were cold in the night, but they were not very uncomfortable. Three of the other men drank a little. They were much colder than the first men, but they did not freeze. Seven men drank more, and their fingers and toes were frostbitten by morning. Six drank a good deal, and they were so badly frozen that they never really got well again. Four drank until they were foolish, and one after the other they all died three or four weeks afterward. The last three men were drunk when they went to bed, and by morning they were frozen to death.

"Each one of these men was strong the day before, and each had the same number of blankets that night. It seemed to be just the whisky and nothing else that made the difference."

HOW COULD IT BE OTHERWISE?

We clip the following from the *Farm, Stock, and Home*:

A LEFT-HANDED "DISASTER."

Prior to January 1, 1916, Breckenridge, Minnesota, was a "wet" town, enjoying all the business advantages that go with the free dispensing of liquors. Since that time the blight of prohibition has struck the little city on the Red River, and this

is how the disaster prophesied has affected the situation: A representative of this paper recently spent a couple of hours looking around the town for evidences of business demoralization. He found a man who had been looking in vain for a suitable house to rent. He found one vacant business place on the main street, and was told that there had been three others, but that they were now occupied, and in each instance by lines of business that provide comfort and well-being for the family. Most disappointing of all to the believer in the theory that local prohibition is bad for a town was the report from the business men. The merchants said their accounts were being better taken care of than before the saloons went, and a banker reported that it was impossible for him to say just how greatly the business of the saloons had injured the town, because of the unusual business conditions prevailing during the past few months, causing an increase in bank deposits since January 1 of something to exceed \$100,000. He had observed no increase in the number of small depositors as yet, but understood that working men's bills were being paid up, and looked for a marked increase in the number of small depositors soon.

This cold businesslike analysis of the effects of prohibition is worth whole reams of hysterical argument either for or against.

"IF PROHIBITION IS ADOPTED, THESE VINEYARDS WILL BE DESTROYED," ETC.

As an illustration of the way the liquor party tries to deceive the people, we clip the following from the *American Issue*:

The liquor interests have posted signs along the line of railroads in vineyards which read: "If prohibition is adopted these vineyards will be destroyed." In some instances their sign posters have done absurd things, for in scores of places the signs are placed in vineyards which do not as a rule ship a ton of grapes to wineries. In one place the proprietor admitted that he had not sold a pound of grapes from his vineyard for wine-making purposes for some years.

I have seen the statement elsewhere that the liquor party were putting up these notices without even asking permission of the owner of the vineyards or other lands where they are sticking them up.

Mr. Root:—I have been riding thru a large grape-growing district, and I noticed large signs posted in every vineyard reading thus: "Prohibition will ruin this fine vineyard. Vote No on both propositions." These vineyard lands will grow almost any cereal crop, and produce great wealth. Can't you say something along dry lines that will help out the dry side of the question? I have come to the conclusion that red liquor and religion will not stay in the same hide. As one goes in, the other comes out. Rialto, Cal., Sept. 17. E. J. ATCHLEY.

BOOZE AND HEAT PROSTRATION.

I clip the following from *The Farming Business*:

DOCTORS BLAME ALCOHOL.

As a result of a study into the cases of heat prostration, Dr. Karl Meyer, medical warden of the County Hospital in Chicago, and Dr. Harry Gauss, an interne, have found that ninety-eight per cent of the heat strokes are traceable to alcoholism or the use of alcohol. Their opinion is based on an examination of 155 cases of heat prostration taken to the County Hospital during three days of the extraordinary hot spell in July. The mortality in these

cases was 44 per cent. Dr. Gauss questioned twenty-five patients suffering from heat stroke. All but two had drunk some alcoholic beverage during the day. The twenty-three confessed to libations extending from one bottle to one gallon of beer, besides stronger drinks. Most of the victims admitted the habitual use of intoxicants.

"It was hardly necessary to question many of them," Dr. Meyer said, "because the external evidence of the use of alcohol was so plain. A case of heat prostration without an alcoholic breath seemed a rarity. In fatal cases the use of a stomach pump commonly revealed the fact that the victim had been drinking. Ninety-eight per cent of the cases were due to alcohol."

From the above it transpires that these sad cases are not the result of extremely hot weather, but mostly the effect of intoxicants. For some time I have been watching to see if the dreaded infantile paralysis were not in some similar way connected with intemperate habits on the part of one or both of the parents. It seems that the whole wide world is just now, for the first time, waking up to the direct and indirect consequences of the drink habit.

Right on the heels of the above comes the following kind word:

Mr. Root:—As my heart goes out in sympathy with your kind and loving words for humanity, and against this terrible demon rum, I cannot help sending you the enclosed clipping.

Chicago, Aug. 24.

W. F. COLEMAN.

The inclosure referred to by the brother is nearly a column from the Chicago *Tribune*, repeating at greater length with terrible emphasis the fact that it is *booze* and *not* the hot weather nor hot sun that causes sunstroke. May God be praised that our leading physicians are waking up, and beginning to call things by their right name.

MINNIE ELLET VERSUS A CITY OF 135,000.

During the recent heated period something was said in the great city dailies about policemen being obliged to stand out in the sun without any shelter. Just recently in the city of Akron (only 20 miles from where I sit dictating this), no protest was made when a *liquor concern* proposed giving one of the members of the police force a big umbrella for protection. Now, when said umbrella was decorated with a liquor advertisement, it seems no one felt like taking the responsibility of protesting (among the 135,000 inhabitants) except this one little woman, who has before this had something to say in our pages in regard to temperance matters. With the above explanation read the following, clipped from the Cleveland *Plain Dealer* of Sept. 8:

WATER CONQUERS RUM; CITY CAN'T AFFORD POLICE SHELTER, SO TEMPERANCE STEPS IN.

Akron, financially embarrassed, was unable to buy a big stationary umbrella to shelter its traffic police-

men, so accepted one from a local liquor concern. The umbrella carried a liquor advertisement.

Naturally this riled Miss Minnie Ellet, temperance leader. City officials explained that the city was broke.

This noon Miss Ellet marched into the city hall with an umbrella of the same size, carrying an advertisement of the virtues of pure water. Chief Durkin accepted it and turned it over to Safety Director Morgan, who installed it at the corner of Main and Quarry streets in the presence of 500 people who watched the performance.

DRUNKS, JAILS, AND UMBRELLAS.

Editor Beacon Journal:—A few weeks ago the newspapers printed the mayor's reason for the many "drunks" that infest our streets—"City prison too small to hold any but the 'disorderlies,' a new city building imperative." Well! The next day another paper told of Belmont County's jail being overflowed and Hancock County's being completely empty. Belmont County is wet; Hancock County is dry. Yesterday I noticed that a brand-new umbrella covered the traffic cop at the Blatiron corner. The ad. upon it is "Grossvater." And then I wondered if our great, prosperous, bankrupt city was advertising for more "drunks," or whether she was too poor to buy her own umbrellas, or whether the "Grossvater" and his kin completely "cover" the city. And I wonder why "strong masculine minds" advocate increased jail facilities as a cure for drunkenness. No government arrests a man for buying more groceries or drygoods than he can carry. Why arrest, imprison, and fine him for buying an over-supply of licensed and protected wet goods? If license does away with speakensies and makes all saloon-keepers law-abiding, where do "drunks" get the where-with-all that makes 'em stagger and bear-eyed even if they're not disorderly?

Aug. 22.

MINNIE J. ELLET.

"AN UNSPEAKABLE CURSE, WITHOUT ONE REDEEMING QUALITY."

We clip the following from the *Methodist Temperance Bulletin*. It seems as if it contains more boiled-down common sense than I ever saw before in regard to the liquor business. Reader, if it is possible, pass it around to your friends who may be likely to vote wet, or, perhaps, not vote at all.

GREAT BUSINESS JOURNAL EXPRESSES ATTITUDE OF AMERICAN INDUSTRY TOWARD DRINK.

The *Manufacturers' Journal*, of Baltimore, is in some particulars the leading industrial publication of the country. Its influence, especially in the South and East, is very strong. Here is what it says of the "liquor business":

"We are absolutely, feetotally, and in every way possible, opposed to the whisky industry, not only because of its immoral influence, but from the economic standpoint. It is a curse to the country, of such gigantic proportions that, the sooner it is blotted out, the better it will be for mankind. The billions of dollars that are annually spent in this country constitute one of the most fearful curses ever brought upon the land, and every dollar thus expended is an economic waste and a drain upon the physical, mental, moral, and financial stamina of the country. Moreover, the alliance of the saloon interests with the politics of the country is another curse, and to this influence is due much of the rottenness in American politics. * * * Whisky and the saloon business are an unspeakable curse, without one single solitary redeeming quality."

HIGH-PRESSURE GARDENING

PLANTING A PEACH-TREE.

When we built our little bungalow three years ago there was a peach-tree perhaps two feet tall standing out near the walk in front of the house. Mrs. Root wanted it pulled up, for, she said, "Who wants a peach-tree out in the front yard close to the walk?" But I told her we would let it alone, and then if it did not bear we would dig it up. In grading the lawn the surface was raised nearly a foot; but I put some bricks around the tree in a circle so as to be about a foot away from the stem. Well, last year it bore perhaps a dozen peaches—great big yellow "Rareries," as we used to call them; and on this 22d day of September I have just picked a bushel of great beauties, and there are nearly as many more left on the tree. After eating something like half a dozen that were dead ripe I said to Mrs. Root, "Sue, these are the finest peaches I ever tasted." She replied, "Oh! you say that of everything."

I leave it to you, my good friends, is it not a pretty good habit to get into, to be *pleased* with things—especially things that God sends us without labor or expense? for I might almost say this beautiful peach-tree with its luscious load never cost us a copper. We never dug around it nor fertilized it, nor did anything to it, and yet there are all these luscious peaches. For many years it has been said that peaches do not succeed in Medina Co. They grow them by the earload along the shores of Lake Erie, but very few are grown in this locality. If you urge that this was an exception, and probably just happened so, I have another story to tell.

On the dividing line between our place and that of our daughter Carrie Belle, her folks planted a barberry hedge; in fact, they planted it before we moved in. Well, right close to my garage, on the dividing line, three peach-trees sprang up of their own accord, like the other one, and two of them are not six feet apart. Now, these three seedlings have quite a good crop of great big handsome peaches. They are a little later than our yellow Rareries. But if four peach-trees grew without any care or cultivation, and bore fine luscious fruit, why could not somebody plant an orchard in that locality and grow peaches? I think there are a few scattered about the town and over the country; but there is no peach-orchard now very near us. While talking about peaches, here is something else: I guess I had better head it—

A SHORT CUT BETWEEN PRODUCER AND CONSUMER.

You know it has been one of my hobbies to have the producer make the shortest cut possible to the consumer, thus leaving out the middleman and a number of profits. I clip the following from the *Cleveland Plain Dealer*:

MOTORISTS BUY PEACHES; OTTAWA COUNTY GROWERS CUT OUT MIDDLEMAN BY FRONT-DOOR SALES.

PORT CLINTON, Sept. 18.—Hundreds of bushels of peaches were taken out of Ottawa County yesterday by automobile traffic alone. Nearly all touring-cars which came thru Port Clinton during the day visited the peach belt and came back with bushel baskets tied to the running boards or strapped to the car in any possible manner.

Growers of this section have learned the best way to dispose of ripe fruit is to pack it in bushel baskets and have it ready along the road to hand to buyers when they drive thru the country.

Buyers are given choice fruit which is just right for immediate use, and relieve the grower of fruit which he would be unable to ship to a distant market. Many automobiles lined up at fish-houses, but were unable to get any fish yesterday.

Just now our nation is full of automobiles, and they are making them, more and more every day; and lots of people use these automobiles to run around over the country just for pleasure, without any *special* errand. Let me now suggest that, when you take your pleasure-ride, you hunt up the producer of something you need—something in the way of daily food, for instance. See what you are getting—get it fresh; and encourage the producer by paying him spot cash, as illustrated in the above clipping.

By the way, I almost forgot the moral connected with that peach-tree close by a sidewalk. Its great luscious peaches have been slowly ripening so near the public walk that one could reach out and pick a peach without even stepping over on the grass, and yet not a peach has been pilfered so far. Don't you think that speaks well for our town of 3000 population? May God be praised for the privilege of living in a community where they respect the property of another even where no *fence* protects fruit when one is passing along the walk. Is not such a state of morals far better than "stone walls" or "barbed-wire" fences?

"FROM PRODUCER TO CONSUMER"—MORE ABOUT IT.

Just after the above was dictated I found something in the *Itural New-Yorker* in regard to long range and short range between producer and consumer. See below:

EXPENSIVE BREAKFAST FOODS.

Not long ago we had breakfast at a farmhouse back some miles in the country. We were offered a choice of six different kinds of "breakfast food,"

Entire wheat boiled soft and served with cream and sugar would have been better than any of the half dozen, and much cheaper. The South Dakota Experiment Station has analyzed 26 different breakfast foods, and finds that they cost all the way from 7 to 44 cents a pound. One sample of "puffed" grain cost 43 cents a pound, while the same grain boiled soft would have been more nutritious, and cost about two cents. When we come to consider this 35-cent dollar let us figure on the breakfast food value of corn, oats, and wheat. We sell wheat at two cents a pound, and buy it back at from 12 to 40 cents!

Just think of it, friends—buying one of the staple daily foods, if not the most staple, for 2 cents a pound instead of paying 40 or even 43 cents! We have been using quite a little oatmeal lately with that nice thick Idaho honey I have been telling you about. Well, without thinking much about it we got it in fancy pasteboard boxes. I do not know how much a pound it cost that way; but you can easily figure it out. Well, we were using so much of it that it occurred to me to ask our grocer if he did not have the flaked oats in bulk. "Oh, yes," he replied; and the price was only 5 cents per lb., whereas if we bought it in pasteboard boxes it would be away up.

Now once more about that automobile. Potatoes are just now at the grocery 45 cents a peck—almost \$2.00 a bushel. Take your automobile and go out where the farmer is digging potatoes, and get enough to last you all winter. Get some potatoes that suit you, and get them for about what the farmer gets by the wagonload. Do the same with winter apples, wheat, eggs, butter, and ever so many other things, and you will save enough in a very short time to help greatly in *paying for the automobile*.

After the above was put in type, when the peaches were almost gone I sent some specimens to our Ohio Experiment Station, and below is a reply from my long-time friend W. J. Green:

Dear Mr. Root:—The peaches which you sent came in good order, altho one or two of them were slightly decayed. The quality is excellent—much better than the average. I have no doubt the size will be sufficient under cultivation. It is too late now to propagate the tree for budding. If the tree should prove to be hardy in bud it would be a very valuable variety.

W. J. GREEN, Horticulturist.

Wooster, O., October 5.

In the above there is something said about the size, as you will notice. Perhaps I should explain that the largest and best had all been used before I thought of sending any to our Experiment Station. The first year the tree bore a dozen or so which were, some of them, extra large.

By the way, I have before mentioned that this peach-tree has never had any pruning; and as now it has a great dense

bushy top, I asked Mr. Green about when to prune it and how to prune it. He replied as follows:

Regarding the time to prune peach-trees I will say that early in the spring is the right season of the year. If you will cut off the tips of the branches at that time, removing nearly half of the growth made this season, the crop of peaches will be improved in size, and the number of bushels not reduced. This cutting-back of the trees every year makes them more stocky and better able to support the crop of fruit. There need not be much thinning-out of branches except in case the branches are, without doubt, too close together.

Wooster, O., Oct. 10.

W. J. GREEN.

SWEET CLOVER; DOES IT GROW BETTER ON HARD SOIL?

I notice in your last booklet you still retain some unfair comparisons in regard to sweet clover growing better on hard soil. The error is made by drawing conclusions from two soils that are different. I nowhere find anything in my experience (which is extensive enough to settle the point), nor in the experience of others, that hard soil is best for sweet clover. It may often be better, but it is not due to its density. It is due to the one fact that it has been for a long time out of cultivation or never cultivated, and the comparison is made with soils worn out by cultivation. The comparison is, therefore, unfair. While sweet clover sprouts better in a firm soil, I have never seen a testimonial that it grew better in a hard soil unless the observation was taken with entirely different soils. I do not think there can be any contradiction on this point. Soils can never be too loose for the best growth of sweet clover, and it germinates better on loose soil than other clover. For very early spring sowing, soils are never too loose for sweet clover. You evidently have no evidence that hard soil is best for sweet clover. Growth of sweet clover can be increased 200 to 300 per cent by cultivation like that given other crops.

Thompson Station, Tenn.

W. H. ARNOLD.

My good friend, you may be right in regard to the matter; but I believe it is the common experience to find tremendous growths of sweet clover where there has been a brickyard or stone quarry where the surface soil has been all removed, etc. I have already cited railway embankments. Here in Ohio we have miles of road made of crushed limestone; and when sweet clover gets started the seed seems to be carried on the wheels of vehicles, and sweet clover springs up all along the roadside close up to the wagon-track. A few days ago I attempted to make some repairs on the limestone road in front of our home. It is so hard that I could hardly move it or loosen it up with heavy blows with a mason's pick; but where sweet clover had gotten a foothold in that hard crushed limestone it was growing up higher than my head.

A year ago I pictured and wrote up my sweet-clover sport, and sent seeds to a great number of the friends from this one plant. Of course I sowed some of the seed myself, and gave the young plants careful cultivation. But a good many of them were thrown out by the frost during winter. The best

plant on the lot is now (July 21) in full bloom, higher than my head, and covered with bees. This plant was on the edge of a strawberry-bed, and had no cultivation, because I wanted to save the strawberries. The hard uncultivated clay seems to have saved it from being thrown out by the frost. I think I shall have to confess that the seedlings of my pet plant are but little if any different from the common white sweet clover. If anything they bloom a little earlier; and for some reason or other the plant is larger, and there seem to be more bees on this plant than on the common sweet clover all around it. One reason may be that it has a place all by itself, whereas the other plants are close together. As I have said, it has had no cultivation whatever. We should be glad to hear from others to whom we sent seed a year ago; and we shall also be glad to get the experience of all along the line of giving sweet clover cultivation and loose soil like other crops.

"A GOLD-MINE ON EVERY FARM."

We clip the following from the *Florida Grower*:

There is a gold-mine on every farm. From the ground now occupied by stumps sufficient food could be grown in a year to equal in value a good-sized gold nugget. Rarely, if ever before, have food products sold for so high a price. Never before have our farmers had so great an opportunity to make

themselves comfortably wealthy from one crop, and at the same time perform a great service to all the world by feeding the hungry.

From what experience I have had I should say the above is about right—not only down in Florida but here in Ohio. All that is wanted is a man who knows how and is not afraid to work. Our boys and girls in the corn and canning clubs will show us how if we are willing to be taught.

FRUIT-TREES.

Inasmuch as there has been considerable discussion in regard to the best remedy for San Jose scale, I wrote to Prof. Gossard, of the Ohio Experiment Station, and below is his reply:

Mr. A. I. Root:—You need have no hesitation at all in running an advertisement in your journal for scalecide. This is one of the very best of all our scale remedies, and is possibly excelled by none. We constantly make use of it in our work, and for a number of scale species get better results with it than with any other remedy. Scalecide rightly divides with lime-sulphur solution first place among remedies for control of San Jose scale. It is particularly useful on old rough-barked apple and pear trees. I enclose a paper by Mr. Houser on the more recent tests of remedies for San Jose scale.

H. A. GOSSARD, Entomologist.

Wooster, O., Oct. 2.

All of you who are interested in better fruit should get right about it and send for the little book by the scalecide people. See their advertisement.

HEALTH NOTES

"MILK AND HONEY;" GOATS' MILK INSTEAD OF COWS' MILK.

With all the good things that get into GLEANINGS I wonder that milch goats have never been written up. The wisest of men said, "And thou shalt have goats' milk enough for thy food, for the food of thy household, and for the maintenance of thy maidens."—PROVERBS 27:27.

The Bible has much to say about milk, and often speaks of honey. When the Israelites were taken from Egypt the Lord promised them "A good land and a large, unto a land flowing with milk and honey."—Ex. 3:8; and it is well known that the Syrian (or they are now called Nubian) goats of Palestine are the finest goats and best milkers of the goat family. Seventeen times in the Bible is "milk and honey" mentioned. It is well known by every Bible student that goats' milk was used by God's ancient people much more than cows' milk, and I assure you that "milk and honey" will have a new meaning to those who use goats' milk and honey. As so many beekeepers are "little landers," it strikes me that they should keep goats, not only to have "milk and honey" but to have the very best, cleanest, easiest digested, most healthful, as well as the cheapest milk, and to be sure that the blessed babies do not get the dread tuberculosis that is destroying its thousands of innocents. "Innoxious, uninfected sanitary nourishment for the infant,

the child, the invalid, and the aged, has been until recently a reflective problem for the medical man as well as the layman;" but goats' milk is solving the problem.

"The fourth annual report of the District of Columbia Association for the prevention of tuberculosis, and this is from the most reliable and highest source of information in the United States, tells us that one-fourth of all cases of tuberculosis among children under 16 years of age, and one-eighth of all fatal cases under 5 years of age, are due to bovine tuberculosis. And among children fed exclusively on cows' milk, nine out of ten cases of fatal tuberculosis revealed that five, or 55 per cent, were due to bovine infection. The most noted authorities of Europe and America agree that the qualities of goats' milk lie in its chemical composition, its immunity from danger of carrying the germs of tuberculosis, and make it the *ne plus ultra* of all foods. As a prophecy, remember that the goat will be the foster-mother and wet-nurse of generations yet unborn."—LOUIS G. KNOX, M. D., D. V. S.

Most people have an idea that goats' milk has some strong, pungent, bitter, or unpleasant taste. I assure you that if you like milk you would drink goats' milk and never know the difference unless you detected that it was exceptionally good.

My wife objected to my getting goats, because I am so "finicky" about the milk I drink. Now that I have goats, I am so "finicky" about my milk that

I am very touchy about the cows' milk I sometimes get in some places. Do you like a cow smell? Well, do you like the cow smell in your milk? How often do you see a really clean milk cow? They are usually smeared with their droppings, and their filthy tail is everlastingly on the swings. My goats are white, and you will never see them unclean. I can sweep their droppings away with a broom. Their tail is short, and never in the way, nor filthy. They are as clean about their food as the ordinary person. They prefer weeds, leaves, shrubs, etc., to grass, but it must all be clean. They are the most docile and lovable of pets; can be kept on one-eighth of a cow's keep; will eat the scraps of bread, fruit, and potato parings from the kitchen (if they are perfectly clean), and will cost for keep but little over one dollar per month if you buy all the feed, and will give from one to four quarts of milk per day that is twice as rich as cows' milk, and absolutely immune to tuberculosis. Thoroughbred Swiss milch goats are expensive; but their crosses on the common goat are cheaper, and sometimes nearly as good. I should like to see more beekeepers and little landers enjoying real "milk and honey," the best milk, the only safe milk. I have nothing for sale.

Noosack, Wash.

REV. ALSON W. STEERS.

We have already had several suggestions that goats' milk be recommended in place of cows' milk; and one writer sent us a number of clippings telling where babies' lives have been saved by substituting goats' milk for cows' milk. But I have always had a prejudice against goats because of the smell that I supposed pertained to all goats. As the writer makes no mention of a disagreeable smell of the animal I have been wondering if there is any particular strain of goats that is devoid of this smell. And besides the smell they have always seemed to me to be very uncouth-looking animals—more so than our other domestic animals. Is it not true that a certain kind of rather expensive cheese is made from goats' milk? If what the writer claims in the above is true, perhaps it may be well to have the matter discussed a little more in GLEANINGS. We have had several sample copies of a periodical devoted exclusively, or nearly so, to the breeding and care of goats.

Later.—Recently while traveling in the northern part of Michigan the train stopped at a junction for some little time. Close by the train a man came up with a little wagon drawn by a goat. It had horns, and was almost as large as a Jersey cow. In fact, I did not know before that goats ever grew to such a size. This big goat seemed to be a novelty to the passengers, for they all began to push their heads out of the window, and finally they gathered around the man and his cart. He was selling peanuts and popcorn. The goat was evidently used to attract attention; and his owner by means of it gathered in quite a lot of dimes and nickels. Was this big goat a large kind of goat, or was he a giant among his own species?

ANIMALS, 95 PER CENT NORMAL AT BIRTH;
HUMANITY ONLY 20 PER CENT; WHY?

I have before made frequent mention of Prof. W. T. Shannon, of Delaware, Ohio. His lifework is not only for better babies but better men and women, "lifting up the fallen," etc. We give below the first page of a six-page leaflet. If you want to help, send for a sample copy of his journal, *Practical Eugenics*, or, better still, send 50 cents and get it a whole year. Address as above.

PRACTICAL EUGENICS.

We have more than eight hundred weekly and monthly publications devoted to better fruit, vegetables, cereals, bees, chickens, and stock. Largely thru their agency we have doubled the variety, size, and quality of our vegetables and fruits, and produced our popular varieties of poultry and breeds of domestic animals. Nearly every man at the head of a family, whether he owns an acre of land or not, subscribes for one or more of these papers. Their wisdom has our commendation.

Not one family in twenty takes a magazine or reads a book devoted to the teaching of sane and practical methods of improving the race of mankind. We have turned the advent of childhood over to ignorance and selfishness. Prudery and ignorance prevail, instead of intelligent child culture. The double standard of morals, so largely responsible for the degenerating habits of tobacco, alcohol, and immorality, goes unchallenged. Young people are teased about sweethearts, marriage is a joke, divorce is an ever increasing reality, and degeneracy threatens the race.

"SMOKING AND FIRE LOSS OF LIFE AND PROPERTY."

The above heading I clipped from a little pamphlet of eight pages and from the eight pages I clip as follows:

This article was prepared by Mr. Williams, at the request of Mr. Rolla V. Watt, Manager of the Royal Insurance Company, San Francisco, California, specially for Manfred P. Welcher, Field Secretary Anti-cigarette League of America, Eastern Division. Copies of this folder will be sent by Mr. Welcher at 5 cts. for 10 copies; 50 cts. for 100; \$5.00 for 1000. General delivery, Los Angeles, California.

The pamphlet contains a vast amount of important matter in regard to fires caused by smoking, particularly from cigarettes; and at the close we read as follows:

The great Baltimore fire, costing the insurance companies fifty million dollars, was caused by a cigarette thrown into rubbish, where it smoldered and finally created the conflagration which looked for a time as if it would sweep the entire city.

Every time a cigar, pipe, or cigarette is lighted, a fire is started; and whether it will become a conflagration that will destroy a block or a whole city depends upon the care or carelessness of the smoker.

There is not an hour of the day that some fire is not being caused by a careless smoker, either with matches or by throwing away his stub of a cigar or cigarette, and some drastic nation-wide action must be taken to prevent it.

The state of Washington passed a law prohibiting the use and sale of cigarettes, and almost instantly the number of preventable fires was reduced.

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- ☐ MY FIRST SEASON'S EXPERIENCE WITH THE HONEYBEE. By "The Spectator," of the *Outlook*. A leaflet humorously detailing the satisfaction of beekeeping. Free.
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- ☐ THE BEEKEEPER AND FRUIT-GROWER. Do you know that bees are necessary in modern fruit culture? This 15-page booklet tells how beekeeping is doubly profitable to the fruit-grower. Free.
- ☐ SPRING MANAGEMENT OF BEES. The experience of some successful beekeepers on solving this perplexing problem. Price 10 cents.
- ☐ THE USE OF HONEY IN COOKING. Just the thing for the up-to-date housewife. Price 10 cents.
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- ☐ HOW TO KEEP BEES. A book of 228 pages detailing in a most interesting manner the experiences of a beginner in such a way as to help other beginners. Price \$1.00 postpaid.
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- ☐ WINTERING BEES. A digest of all the information on the subject. Thoroughly modern and practical. Price 10 cents.
- ☐ THE BUCKEYE HIVE, or the management of bees in double-walled hives. Will interest the amateur especially. Illustrated. Price 10 cents.
- ☐ SWEET CLOVER, the all-around forage crop. Just off the press. Investigate this astonishing plant. Free.
- ☐ ADVANCED BEE CULTURE. A summary of the best ideas of experts in apiculture. The book is beautifully printed and bound, 205 pages. Cloth. \$1.00 postpaid.

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Whys and Wherefores of Fall Spraying

is the title of a little booklet, giving seven reasons, official and non-official, why it is the best time to spray. This booklet will be sent out by the B. G. Pratt Co., 50 Church St., New York, manufacturers of the well-known "SCALECIDE" at a very early date. If you are not on their mailing list, send them a postal today giving the number of your trees and your dealer's name and you will receive a copy free. Address Dept. 6.

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Classified Advertisements

Notices will be inserted in these classified columns for 25 cts. per line. Advertisements intended for this department cannot be less than two lines, and should not exceed five lines; and you must say you want your advertisement in the classified columns or we will not be responsible for errors.

HONEY AND WAX FOR SALE

A No. 1 clover in 120-lb. cases at 8 cts. Sample 10 cts. H. C. LEE, Brooksville, Ky.

In new 60-lb. cans, clover honey, 8 cts.; buckwheat, 7. G. H. ADAMS, box 184, Schenectady, N. Y.

A1 clover—amber-blend honey in new 60-lb. cans, at 8 cts. VAN WYNGARDEN BROS., Hebron, Ind.

FOR SALE.—Fine extracted buckwheat honey, \$8 per case of 118 lbs. net. LEROY LLOYD, Caywood, N.Y.

Buckwheat honey, comb and extracted; also clover extracted, 60-lb. cans. E. L. LANE, Trumansburg, N. Y.

Well-ripened clover and buckwheat honey in new 60-lb. cans—two cans to the case. B. B. COGGSHALL, Groton, N. Y.

Clover-basswood blend and buckwheat honey. Two 60-lb. cans to the case, 8 cts. per lb. EARL RULISON, Rt. 1, Amsterdam, N. Y.

Clover honey (1916 crop) of very heavy body—a fancy article. Write for prices and a 5-cent sample. M. W. HARRINGTON, Williamsburg, Iowa.

Light-amber extracted honey, 60-lb. cans, at 6 cts. per lb., f. o. b. cars. Sample, 10 cts. C. R. ALLEN, Vicksburg, Miss.

Choice new-crop white-clover extracted honey in new 60-lb. tin cans the bargain of the season; sample, 10 cts. D. R. TOWNSEND, Northstar, Mich.

FOR SALE.—A1 sweet-clover honey in 60-lb. cans, two cans to a case, 7½ cts. per lb., f. o. b. cars. JOE C. WEAVER, Cochrane, Ala.

FOR SALE.—Clover honey of finest quality in new 60-lb. cans at 8½ cts. per lb. Also fancy and No. 1 clover comb honey, 4¼ x 1½ sections. MARTIN CARSMOE, Ruthven, Iowa.

FOR SALE.—Raspberry, basswood, No. 1 white comb, \$3.00 per case; fancy, \$3.25; 24 Danz. sections to case; extracted, 120-lb. cases, 9 cts. per lb. W. A. LATSHAW Co., Clarion, Mich.

FOR SALE.—A limited quantity of choice stock buckwheat and pure clover honey in 60-lb. cans and 5-lb. pails. C. J. BALDRIDGE, Homestead Farm, Kendaia, N. Y.

No. 1 white comb, \$3.50 per case; No. 2, \$3.00; No. 1, fall comb, \$3.00; No. 2, \$2.50; 24 sections to case; extracted in 60-lb. cans; clover, 9 cts.; amber, 8 cts. Amber in pails, 6 ten-pound or 12 five-pound to case at \$6.00 per case. H. G. QUIRIN, Bellevue, O.

RASPBERRY HONEY.—Thick, rich, and delicious. Put up for sale in 60-lb. tin cans. Price \$6.00 a can. Sample by mail for 10 cts., which may be applied on any order sent for honey. Write for price on large lots. ELMER HUTCHINSON, Rt. 2, Lake City, Mich.

FOR SALE.—5000 lbs. fancy extracted white-clover honey; also a quantity of extracted heartsease and Spanish-needle blend, put up in barrels of about 550 lbs. net, and new 60-lb. cans. Honey is thoroughly ripened, and there is none better on the market. Prices reasonable. Sample, 10 cts. EMIL J. BAXTER, Nauvoo, Hancock Co., Ill.

HONEY AND WAX WANTED

WANTED.—Comb, extracted honey, honey-dew, and beeswax. W. A. LATSHAW Co., Clarion, Mich.

WANTED.—Comb and extracted honey, in car lots and less carlots. J. E. HARRIS, Morristown, Tenn.

WANTED.—Comb honey. What have you to offer? R. V. STROUT, 325 11th St., S. W., Washington, D.C.

Beeswax bought and sold. STROHMEYER & ARPE Co., 139 Franklin St., New York.

WANTED.—Extracted honey in any lots. Send sample and prices. ED. SWENSON, Spring Valley, Minn.

WANTED.—Beeswax. State price and quantity. RUDOLPH OSTHEIMER, Sandusky, O.

WANTED.—Comb honey, fancy and No. 1 white clover; also buckwheat comb; glassed sections preferred. HOFFMAN & HAUCK, Richmond Hill, N. Y.

WANTED.—Comb and extracted honey, light and dark; any quantity; send sample and price. THE BEEHIVE, Moville, Iowa.

WANTED.—1000 lbs. extracted white-clover honey. Give price. D. KRAMER, Scholls' Lane and Eastern Ave., Cincinnati, Ohio.

WANTED.—10,000 lbs. of extracted honey; state price and how packed; send sample. L. D. MARTIN, 206 E. Jefferson St., Louisville, Ky.

BEEWAX WANTED.—For manufacture into Weed Process Foundation on shares. SUPERIOR HONEY Co., Ogden, Utah.

FOR SALE

White-blooming sweet clover, only 9 cts. per lb. GEORGE M. CALLEN, Selma, Ala.

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FOR SALE.—A full line of Root's goods at Root's prices. A. L. HEALY, Mayaguez, Porto Rico.

Beekeepers, let us send you our catalog of hives, smokers, foundation, veils, etc. They are nice and cheap. WHITE MFG. Co., Greenville, Tex.

FOR SALE.—Cedar or pine dovetailed hives, also full line of supplies, including Davetail's foundation. Write for catalog. A. E. BURDICK, Sunnyside, Wash.

Q. C. hive's yield, account of its winter protectiveness, equable temperature, brood-nest work, incentive, etc., sixty pounds more than average of others. Can you afford not to test it? Address W. F. MCCREADY, box 1, Estero, Fla.

THE ROOT CANADIAN HOUSE, 185 Wright Ave., Toronto, Ont., successors to the Chas. E. Hopper Co. Full line of Root's goods; also made-in-Canada goods. Extractors and engines; GLEANINGS and other bee-journals; Prairie State incubators. Get the best. Catalog and price list free.

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A small farm in California will make you more money with less work. You will live longer and better. Delightful climate. Rich soil. Hospitable neighbors. Good roads, schools, and churches. Write for our San Joaquin Valley illustrated folders free. C. L. SEAGRAVES, Industrial Commissioner A. T. & S. F. Ry, 1934 R'y Exchange, Chicago.

THE SOUTH FOR FARM PROFITS.—Southern lands are low in price—give large yields of corn and other grains, grasses, and forage crops; all kinds truck; grow fine fruit. You can get good lands in healthful location, where climate is pleasant and works for you, where two and three crops grow annually, for \$15 to \$50 an acre, according to improvements. Great opportunity for general farmers, stock-raisers, dairymen, poultry-raisers, fruit and truck growers. Information on request. M. V. RICHARDS, Ind. and Agr. Commissioner, Room 27, Southern Railway, Washington, D. C.

IN THE SUNNY SOUTH.—300 colonies of bees; sell all or part at a bargain; good honey-gatherers, no disease; straight combs; in No. 1 good shape. To the party taking all, will put in team of horses, 200 queen-excluders, 1000 extra frames, one 4-frame extractor, hand or power, practically new; one 10-inch foundation-mill, new, and 300 full-depth 10-frame supers with frames. If you want to go into the bee business where the bees fly nearly every day in the year this is the place. Some of these same colonies gathered 275 lbs. this year. Will treat you right. \$1500 takes it all. NUCES VALLEY APIARIES, Calallen, Texas.

WANTS AND EXCHANGES

WANTED.—Fifty to eighty colonies bees in ten-frame hives. G. BRUNDAGE, Salisbury Mills, N. Y.

WANTED.—To furnish every beekeeper within 500 miles of Boise, Idaho, with the best and cheapest bee supplies on the market, *quality considered*. Send me your order or a list of your requirements for 1916. Our catalog and price list will be mailed to you free. Order early and get the discounts.

C. E. SHRIVER, Boise, Idaho.

BEEES AND QUEENS

Finest Italian queens. Send for booklet and price list. JAY SMITH, 1159 De Wolf St., Vincennes, Ind.

Well-bred bees and queens. Hives and supplies. J. H. M. COOK, 84 Cortlandt St., New York.

FOR SALE.—200 colonies mixed bees in chaff hives, \$4.00 per colony at the yard; fine condition. R. J. SMITH, Ticonderoga, N. Y.

FOR SALE.—300 to 500 colonies in A No. 1 condition in famous Hagerman Valley, where failure is unknown. Address J. E. HANKS, Hagerman, Ida.

Italian queens bred for their honey-gathering qualities. One, \$1.00; six, \$5.00. EDITH M. PHELPS, Binghamton, N. Y., East End.

FOR SALE.—36 colonies of Italian bees; will be sold cheap. Hives, bees, and stands in the best of condition. EDW. NESVACIL, Mazomanie, Wis.

FOR SALE.—Golden Italian queens that produce golden bees; for gentleness and honey-gathering they are equal to any. Every queen guaranteed. Price \$1; 6 for \$5. WM. S. BARNETT, Barnetts, Va.

Leather-colored "Nutmeg strain" queens, \$1.00; \$10.00 per dozen. Tested, \$1.50. Special price on large lots by return mail. A. W. YATES, 3 Chapman St., Hartford, Ct.

Southwest Virginia five-band Italian queens, the fancy comb-honey strain, gentle to handle. They will please you. Try one. \$1.00 each. HENRY S. BOHON, Rt. 3, box 212, Roanoke, Va.

Golden Italian queens that produce golden bees; the highest kind, gentle, and as good honey-gatherers as can be found; each, \$1.00; 6, \$5.00; tested, \$2.00; breeders, \$5.00 to \$10.00. J. B. BROCKWELL, Barnetts, Va.

GRAY CAUCASIANS.—Early breeders, great honey-gatherers; cap beautifully white; great comb-builders; very prolific; gentle; hardy; good winterers. Untested, \$1; select untested, \$1.25; tested, \$1.50; select tested, \$2.00. H. W. FULMER, Andalusia, Pa.

FOR SALE.—Italian bees, 1 lb. with queen, \$2.25; one-frame with queen, \$2.00. Queens, 75 cts. each. Safe delivery guaranteed; 30-page catalog with beginner's outfit for stamp. THE DEROY TAYLOR CO., Newark, N. Y. (formerly Lyons).

My bright Italian queens will be ready to ship April 1, at 60 cts. each; virgin queens, 30 cts. Send for price list of queens, bees by the pound and nucleus. Safe arrival and satisfaction guaranteed. M. BATES, Rt. 4, Greenville, N. Y.

Phelps' Golden Italian Queens combine the qualities you want. They are great honey-gatherers, beautiful and gentle. Mated, \$1.00; 6, \$5.00; tested, \$3.00; breeders, \$5.00 and \$10.00. C. W. PHELPS & SONS, Wilcox St., Binghamton, N. Y.

Queens for requeening. Best on market. One untested, \$1.50; 12, \$12.00; one tested, \$2.00; 12, \$18.00; one select tested, \$3.00; 12, \$24.00. Special low price on 50 or more. Write. Safe delivery and satisfaction guaranteed. THE J. E. MARCHANT BEE & HONEY CO., Canton, Ohio.

QUEENS.—Improved three-banded Italians, bred for business, June 1 to Nov. 15, untested queens, 75 cts. each; dozen, \$8.00; select, \$1.00; dozen, \$10.00; tested queens, \$1.25 each; dozen, \$12.00. Safe arrival and satisfaction guaranteed.

H. C. CLEMONS, Rt. 3, Williamstown, Ky.

I will sell at auction 60 stands of bees Nov. 9, and other stock and machinery; the farm of 100 acres—good land with two sets of buildings; one set on the 80-acre farm, and one set on the 20-acre farm. The farms join. They are to be sold inside of a year to settle estate. MRS. ANGELINA A. HUFFMAN, Administratrix, Rt. 3, Nashua, Iowa.

Fine three-banded Italian queens. Circular and price list free. J. L. LEATH, Corinth, Miss.

TENNESSEE-BRED QUEENS.—My three-band strain that has given such universal satisfaction for over 40 years. Orders filled promptly or money returned by first mail. 1000 nuclei in use. Tested, in June, \$1.75; untested, \$1.00; in July, \$1.50 and 75 cts. Postal brings circular.

JOHN M. DAVIS, Spring Hill, Tenn.

HOLLOPETER'S honey-gathering strain of Italians are now at their best. This strain has a record of 100 lbs. more honey per colony than the average colony. Safe arrival by return mail. Untested queens, each, 75 cts.; 10 for \$6.00, 20 for \$10.00. Tested queens, each, \$1.00. 1 lb. bees with queen, \$2.00. We are booking orders now for spring delivery.

J. B. HOLLOPETER, Pentz, Pa.

HELP WANTED

WANTED.—Experienced young man for our beekeeping supply department; one who has a knowledge of beekeeping and is not afraid to work. Give reference, and state salary expected. THE FRED W. MUTH CO., "The Busy Bee Men," 204 Walnut St., Cincinnati, Ohio.

TRADE NOTES

SECOND-HAND 60-LB. CANS.

Our supply of second-hand cans at New York has been disposed of; but we still have a good supply both at Medina and Philadelphia of choice cans suitable for use again in shipping honey. These we are selling at \$4.00 for 10 cases; \$8.50 for 25 cases; \$30.00 for 100 cases.

CHIPPED TUMBLERS CHEAP.

We again have a supply of two or three hundred cases of 2 dozen each of tin-top tumblers holding 6½ oz. of honey, or ¼ lb. of jelly. They have the edges slightly chipped so they cannot be sealed airtight for shipping, but will serve as a cheap container for some uses. We offer them, while they last, at \$2.00 for ten cases of 2 dozen each, including the tin tops.

NO. 4 EXTRACTOR FOR SHORT FRAMES CHEAP.

One of our dealers has an overstock of No. 4 Novice extractors which he offers to return at a price that permits us to offer them at \$6.50 each. If among our readers there is any one who uses short frames not over 13½ inches wide under top-bar, or 13 inches deep or less than these dimensions here is a bargain for him. Just half present list price of this size of machine.

MASON FRUIT-JARS.

We have a surplus stock of choice Atlas Mason fruit-jars which we offer, to reduce stock, at the following prices which are good only while this stock lasts, and for shipment from Medina, Ohio, only. Pint Mason jars, 45 cts. per doz.; \$5.25 per gross. Quart Mason jars, 48 cts. per doz.; \$5.50 per gross. Two-quart Mason jars, 75 cts. per doz.; \$8.50 per gross.

These are packed in paper cartons of one dozen each. Pint size would stand reshipping short distances filled with honey, altho we would not recommend it.

SPECIAL BARGAIN IN WINTER HIVES.

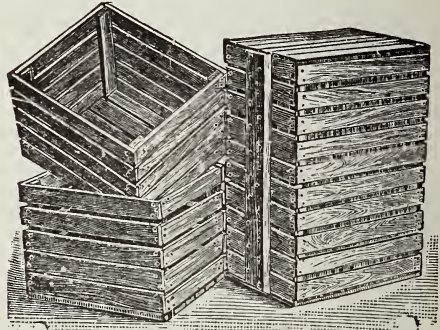
The time for putting bees into winter quarters is at hand. There may be some who would try out the double-walled hives if they could buy them at bargain prices. We have available for shipment from St. Louis, Mo., if ordered this month, fifty each of eight-frame and ten-frame Dovetailed chaff hives of old-style with tight bottom and wood cover. We offer these, to close them out quick, at just half price.

They are one-story with telescope cover and Hoffman frames, put up in crates of 5 each. We offer the eight-frame at \$7.00 per crate of 5, or \$60.00 for the lot of 50 hives. The ten-frame at \$7.50 per

crate of 5, or \$65.00 for the lot of 50 hives. This is as low as our wholesale price on single-walled hives, and surely is a bargain to any one who can use them. Here is a chance to test the advantage of a double-walled hive over a single-wall without the hives costing you any more. Stock must be moved at once, therefore we are placing the price at a figure that should find a buyer quickly.

BUSHEL BOXES.

We have on hand, ready for immediate shipment, a good stock of these boxes, packed as shown in cut. They are made with oak corner posts and bottom end slats to receive the nails, the remainder of the box being basswood. They are very convenient, and popular for handling potatoes, apples, onions, and other farm crops. They hold a heaped bushel level full, so they can be stacked any height desired. To reduce stock we offer them for a short time at the following special prices:



All-slatted bushel boxes, per crate of 14, \$2.25.

Slatted bushel boxes, per crate of 12, \$2.10.

Galvanized bound boxes, per crate of 12, \$2.75.

In lots of 10 crates or more, 5 per cent discount.

The all-slatted is the cheapest, and the most popular style. Two are nailed in each package, and sufficient nails are included for the remainder.

THE A. I. ROOT CO., Medina, O.

Special Notices by A. I. Root

T. B. TERRY AND "THE STORY OF THE SOIL."

Some of our readers may wonder that I have had so little to say about my long-time friend T. B. Terry since his death on the first day of this year. Well, it is not because I have forgotten him. There is hardly a day but that I think of him, and feel lonesome without his counsel. The matter was brought to mind by looking over the book, "The Story of the Soil," which our people have been offering to the readers of GLEANINGS at a ridiculously low price. Well, in this book there is a report of one of Terry's happy talks, given at a farmers' institute, that covers about 20 pages. That talk alone is, in my mind, worth the price of the book; yes, and GLEANINGS thrown in; and yet you are offered both the book and GLEANINGS for only \$1.15. Well, even if the 15 cents does not come anywhere near the cost of the book to us, the book will do a lot of good to the readers of GLEANINGS. See advertisement on the back cover of this issue.

Convention Notices

The twenty-sixth annual meeting of the Illinois State Beekeepers' Association will be held in Springfield on Wednesday and Thursday, November 15 and 16, 1916. Further notice will be given in the dailies and individual notices with program sent to all the members of the association.

Springfield, Ill., Oct. 9. JAS. A. STONE, Sec.